

***Patients, Performance and Parlours:
the perception and socially constructed practises of
dental sedation clinics***

Stephen Mark Woolley

**A thesis presented in fulfilment of the requirements
for the degree of
Doctor of Philosophy at Cardiff University.**

2012

Declaration

No portion of this work has previously been submitted in substance for any other degree or award at this or any other university or place of learning, nor is being submitted concurrently in candidature for any degree or other award.

Signed.....(Candidate) Date.....

STATEMENT 1

This thesis is being submitted in fulfilment of the requirements for the degree of **PhD**.

Signed.....(Candidate) Date.....

STATEMENT 2

This thesis is the result of my own independent work/investigation, except where otherwise stated. Other sources are acknowledged by explicit references. The views expressed are my own.

Signed.....(Candidate) Date.....

STATEMENT 3

I hereby give consent for my thesis, if accepted, to be available for photo-copying and inter-library loan, and for the title and summary to be made available to outside organisations.

Signed.....(Candidate) Date.....

Acknowledgements

Whilst this doctoral thesis is the result of my own independent investigation, there have been many people whose input has helped me to complete this study. There are too many to list them all, but some deserve to be specifically acknowledged.

I would like to thank Professors Ruth Freeman and Lindsay Prior for spending the time to explore the argument presented in this thesis

Sincere and profound appreciation must be given to my supervisors Professor Barbara Chadwick, Dr. Lesley Pugsley and Dr. Rob Evans, and my original supervisor Dr. Kate Stewart, for their encouragement, help, guidance, inspiration and considerable patience. Their belief in my ability and the relevance of my research were invaluable. With feedback from diverse interests and areas of expertise there was always a risk that so many cooks would 'spoil the broth'. The variety of input they provided however has enriched and enhanced both the process and product of my research. It has been a pleasure learning from them, and I hope I will continue to do so.

I am also grateful for the help, advice and support given to me in various ways by other people without an official supervisory role. Thanks must go to Dr. Shelagh Thompson for supporting me throughout the process, encouraging me to undertake a higher degree, 'gatekeeping' my research and showing interest in my progress; Helen McFarlane for starting me down the qualitative route in the first place; Rhiannon Jones and Ilona Johnson for their encouragement and input as my fellow 'qualitative research group' members; Dr. Mick 'Gordon' Allen for reading and commenting upon aspects of the thesis; Dr. Sara Delamont for doing likewise as

well as suggesting areas of literature to explore and providing various aspects of training; Professor Amanda Coffey for helping to arrange supervision and for assessing my progress over the duration of this research; and Dr. Emma Hingston for her P.M.A. and willingness to demonstrate interest in the progress of this research over countless lunchtime conversations. I am also extremely grateful to those researchers I contacted who spared the time to help me with requests for papers, or discussed aspects of my research. In particular, thanks is due to Professors Kathy Charmaz, Adele Clarke and David Guston for not immediately deleting unsolicited emails from a postgraduate student across the pond in Cardiff.

I am very grateful to the patients, referrers, and secondary care providers who generously gave me their time, told me their stories and entrusted me with their thoughts and feelings. Without them, this thesis could not exist.

Finally I owe a huge debt of thanks to Louise. Her quick-thinking and enquiring mind, her understanding, her support and sacrifice have challenged and encouraged me throughout this venture. Whilst I struggled to produce this 'baby', she grew, birthed and nurtured some of our own. Thanks for the sacrifices you've made and the patience you've shown, I really do appreciate them!

***...Two roads diverged in a wood, and I -
I took the one less traveled by,
And that has made all the difference.***

Robert Frost (1916)

Dedication

To L.E.A, J.F.W, B.K.J and N.S.D

¡Porque las moscas!

Table of Contents

Declaration	i
List of Figures	ix
List of Tables	ix
Abbreviations	x
Abstract	1
Chapter One - Introduction	3
1.1 Introduction	3
1.2 Dental Anxiety and Sedation	4
1.3 Secondary Care Sedation Clinics	6
1.4 The Technical Provision of Sedation	8
1.5 The Problem of Sedation Provision	11
1.6 The Choice of Research	12
1.7 The Theoretical and Methodological Approach	14
1.8 The Reflexive Approach	17
1.9 Thesis Layout	19
Chapter Two - Literature Review	23
2.1 Introduction	23
2.2 Dental Anxiety	23
2.2.1 Introduction	23
2.2.2 The Prevalence of Dental Anxiety	24
2.2.3 The Impact of Dental Anxiety on Dental Practitioners	26
2.2.4 The Impact of Dental Anxiety on Patients	27
2.2.5 Managing Dental Anxiety	29
2.2.5.1 The Importance of the Dentist:Patient Relationship	30
2.3 Conscious Sedation for Dentally Anxious Patients	32
2.3.1 Introduction	32
2.3.2 The Development of Sedation within the United Kingdom	34
2.3.3 The Need for Conscious Sedation within the UK	35
2.3.4 The Demand for Sedation within the UK	37
2.3.5 The Purpose of Conscious Sedation for Anxious Patients	39
2.3.6 The Benefits and Disadvantages of Conscious Sedation	39
2.3.7 The Location of Conscious Sedation Provision	42
2.3.8 The Impact of Conscious Sedation	44
2.3.9 Conscious Sedation Education	47
2.3.10 Experiences of Sedation	49
2.4 Summary	50
2.5 The Social Science of Frontiers	51
2.5.1 Introduction	51
2.5.2 Social Worlds	51
2.5.3 Frontier-definition	54
2.5.4 Frontier-spanning	56
2.5.5 Frontier display	61
2.5.6 Frontier transition	66
2.5.7 Summary	71
2.6 Conclusion	72

Chapter Three - The Research Process	74
3.1 Introduction.....	74
3.2 The Research Question	74
3.3 Method Choice.....	75
3.3.1 Ethnography	75
3.3.2 Auto-ethnography	76
3.3.3 Semi-structured Interviews.....	77
3.3.4 Setting	79
3.4 Sampling.....	80
3.4.1 Access: Getting In and Getting On.....	81
3.4.2 Interviewing Referring Clinicians	83
3.4.3 Interviewing Patients.....	84
3.4.4 Interviewing Sedation Providers.....	86
3.5 Conducting the Interview	89
3.6 Clinician-Researcher Role and Identity	93
3.6.1 Interviewing Peers	94
3.6.2 Interviewing Patients.....	96
3.6.3 Impression Management.....	98
3.7 Ethics.....	100
3.7.1 Power	100
3.7.2 Consent	101
3.7.3 Confidentiality	102
3.8 Analysis	104
3.8.1 Grounded Theory.....	105
3.8.2 Coding and Memoing.....	108
3.8.3 Mapping Situations	111
3.8.4 Computer Aided Analysis.....	112
3.9 The Writing Process.....	113
3.10 Conclusions	114
Chapter Four - Accommodating the Purpose of Sedation.....	116
4.1 Introduction.....	116
4.2 The SCSC Interface.....	117
4.2.1 The SCSC Clinical Boundary Organisation	117
4.2.2 The Standardised Package of Conscious Sedation.....	120
4.3 Dealing with the Present.....	120
4.3.1 Removing Anxiety and Allowing Treatment.....	121
4.3.1.1 Providing Anxiolysis	121
4.3.1.2 Providing Access.....	122
4.3.2 Passing Out: Removing Awareness.....	124
4.3.3 Passing On: Providing Educational Training	126
4.4 Changing the Future	131
4.4.1 Passing Through: Rehabilitating to Primary Care.....	131
4.5 Conclusion.....	134
Chapter Five - Performing Sedation	137
5.1 Introduction.....	137
5.2 The Presentation of Dentistry in SCSCs	137
5.3 Presenting the Clinic Setting.....	139
5.3.1 The Importance of Physical Space.....	139
5.3.2 The Importance of SCSCs	141
5.4 Presenting as a Clinician	148
5.4.1 Managing Emotion.....	150
5.4.1.1 Containing Emotions	154
5.4.2 Demonstrating Competence and Confidence.....	159

5.5 Conclusion.....	161
Chapter Six - Adapting Use.....	163
6.1 Introduction.....	163
6.2 Articulation Work.....	163
6.3 The Right Tool for the Job.....	164
6.4 Sedation Technology- Just a Tool?.....	166
6.5 Articulating Sedation.....	168
6.5.1 Managing the Sedative Effect.....	169
6.5.1.1 Augmenting the Sedatives.....	169
6.5.1.2 Providing Memories.....	173
6.5.2 Managing Escorts.....	175
6.5.3 Treating Flexibly.....	177
6.5.3.1 Interpersonal Flexibility.....	178
6.5.3.2 Procedural Flexibility- Sedation Provision.....	179
6.5.3.3 Procedural Flexibility- Dental Care.....	181
6.6 Conclusion: Just a Tool or the Right Tool for the Job?.....	184
Chapter Seven - Managing Risk.....	186
7.1 Introduction.....	186
7.2 Managing the Risk of Sedation Technology.....	187
7.2.1 The Physical Risk of Sedation Treatment.....	187
7.2.2 The Professional Risk of Sedation Treatment.....	192
7.2.2.1 The Boundary Work of Sedation Provision.....	193
7.3 Managing the Risk of SCSC Sedation Provision.....	200
7.3.1 The Risk of 'Adversely Selecting' Sedation Providers.....	201
7.3.2 The 'Moral Hazard' of Patients and Referrers.....	205
7.4 Conclusion.....	213
Chapter Eight - Patient Outcomes.....	214
8.1 Introduction.....	214
8.2 The Liminal Clinic.....	215
8.3 The Vicious Cycle of Dental Anxiety.....	216
8.4 Stopping the Vicious Cycle- Having Dental Treatment.....	216
8.5 Breaking the Vicious Cycle- Developing Trust.....	218
8.6 Replacing the Vicious Cycle- Developing Dependency.....	222
8.6.1 Depending on the Clinic.....	223
8.6.2 Depending on the Sedative.....	231
8.6.3 Reacting to Discharge.....	237
8.6 The Sedation Vicious Circle.....	240
8.8 Conclusion.....	243
Chapter Nine - Conclusions and Reflections.....	246
9.1 Introduction.....	246
9.2 The Domestic Parlour.....	247
9.3 The 'Parlour'.....	248
9.4 The SCSC Parlour.....	251
9.4.1 Hosting Visitors.....	253
9.4.2 Performing for an Audience.....	257
9.4.3 Influencing Inhabitants.....	262
9.5 Reflections on the Research Process.....	265
9.5.1 Implications for Clinical Care.....	268
9.5.2 Suggestions for Further Research.....	271
9.6 Conclusion.....	274

Chapter 10 - Appendices	277
10.1 Appendix 1 - Ethical Approval	277
10.2 Appendix 2 - Early SCSC Situational Map	280
10.3 Appendix 3 - Participant Invitation Letter.....	281
10.4 Appendix 4 - Information Sheets for Participants	283
10.4.1 Patient Information Form.....	283
10.4.2 Referrer Information Form.....	285
10.4.3 Sedation Staff Information Forms.....	287
10.5 Appendix 5 - Interview Topic Guides.....	289
10.5.1 Interview Guide- Patients	289
10.5.2 Interview Guide- Referrers	290
10.5.3 Interview Guide- Staff.....	291
10.6 Appendix 6 - SCSC Social World Map	293
10.7 Appendix 7 - Peer-reviewed Publication and Presentation.....	294
Bibliography	296

List of Figures

Figure 1.1 A typical poly-clinic.....	7
Figure 1.2 A patient having intravenous sedation with midazolam	9
Figure 1.3 A patient having nitrous oxide inhalation sedation.....	10
Figure 1.4 The research questions	12
Figure 2.1 The dental anxiety vicious cycle.....	27
Figure 2.2 Boundary processes and structures of interacting social worlds.....	54
Figure 2.3 Liminal transitions	67
Figure 2.4 Liminoid experiences and permanent liminal states	70
Figure 2.5 Hosting frontier work.....	72
Figure 3.1 Simplified diagram of the iterative qualitative research process	81
Figure 3.2 Models of the research process	104
Figure 3.3 The grounded theory process	106
Figure 3.4 Example of open coding	109
Figure 3.5 Section of NVivo 'Flexibility' tree nodes.....	112
Figure 4.1 The SCSC as a meeting point for different social worlds.....	119
Figure 5.1 Cubicle with frosted glass screens for privacy and isolation	144
Figure 5.2 No Entry sign preventing 'through-traffic'	144
Figure 5.3 Foldable screens preventing 'through-traffic' and giving privacy.....	144
Figure 8.1 Discourse map of sedation location and safety	226
Figure 8.2 The sedation vicious cycle	241
Figure 9.1 The boundary organisation and the Parlour	250
Figure 9.2 The SCSC Parlour	253

List of Tables

Table 2.1 Prevalence of dental fear and anxiety internationally.....	25
Table 2.2 Prevalence of dental anxiety based on MDAS and DAS scores	26
Table 2.3 Sedation need and anxiety severity.....	37
Table 3.1 Referrer participants (- missing data)	84
Table 3.2 Patient participants.....	85
Table 3.3 Sedation staff participants.....	87

Abbreviations

ACD	A Conscious Decision
DGA	Dental General Anaesthesia/ Anaesthetic
DSTG	Dental Sedation Teachers Group
DWSIs	Dentists with Special Interests
GA	General Anaesthesia / Anaesthetic
GDC	General Dental Council
GDS	General Dental Services
IHS	Inhalation Sedation (with nitrous oxide)
IV	Intravenous
IVS	Intravenous Sedation (with midazolam)
PCDP	Primary Care Dental Professional
PCMP	Primary Care Medical Professional
PCO	Primary Care Organisation
PCT	Primary Care Trust
SAAD	Society for the Advancement of Anaesthesia in Dentistry
SCSC	Secondary Care Sedation Clinic
SCDP	Secondary Care Dental Professional

Abstract

Conscious Sedation is a pharmacological intervention which enables anxious patients to have dental treatment. Although there is a strong research tradition into the efficacy of sedation modalities, there is a weak evidence base for the experience of sedation by those who use it.

The aim of this thesis was to explore patients', referrers' and providers' understandings and experiences of conscious sedation and the Secondary Care Sedation Clinics which use it.

A qualitative study was undertaken of stakeholders' experiences of conscious sedation provided by five Secondary Care Sedation Clinics within the United Kingdom. Data were collected through thirty one semi-structured interviews, which were transcribed verbatim and subsequently analysed using a constant comparative method.

The data show that sedation and secondary care sedation clinics are imbued with a variety of interpretations by differing participants. Patients primarily perceive sedation clinics as access points for addressing dental needs, whilst clinicians also anticipate an influential role in rehabilitating patients to primary care and recognise the importance of such settings for training future dentists. Successful sedation provision requires a variety of work, and sedation clinics play a hosting role to visiting patients as hinterlands to the dental world. The outcome of patients' engagement with sedation clinics varies from breaking avoidant patterns to creating a cycle of sedation dependency, whilst the process of sedation performance has a potential negative impact for providers.

The purposes and processes reported by participants mirror those of Victorian domestic parlours. This thesis suggests a novel theoretical construct of clinical 'Parlours'. Such frontier social structures provide safe interaction for patients in a temporarily hosting environment. They require front-stage performance augmented by back-stage work, and seek to influence patients in the long-term whilst providing short-term clinical services. Further research is required to explore the transferability of such a concept to other clinical settings.

Chapter One - Introduction

Oh Meddazzaland, Medazzaland,

I have a problem they said they could solve...

Do they really understand what's wrong?

I feel their hands on my skin, the time has come for them to begin

I'm sinking deeper and deeper

into Medazzaland

(Medazzaland: Duran Duran, 1997)

Carl hands his appointment card in to the receptionist and takes a seat in the waiting area opposite the reception desk. It is an open rectangular space at the end of a corridor, populated with some comfortable chairs and a table with a few magazines on it. This is his first appointment since he went to the dentist four months ago with toothache - before that he hadn't been seen since he was a teenager. He swipes open his phone and starts tapping the screen, but finds he can't concentrate on the game he's trying to play. "This isn't for me" he thinks "not today. I just can't deal with this today. Maybe I'll just go. What if I lose control? What if I die?!"

To focus his mind he starts looking around him. The automatic door at the end of the row of chairs has a large sign on it: 'Sedation in Progress. Do Not Enter'. "What the hell do they do in there then?" he thinks, "Why do they need to keep it out of bounds? What will they do to me?" As he reflects on the horrific answers his imagination supplies in response, the door opens and a nurse comes out and calls his name. He hears himself mutter a feeble "yes?" and the nurse looks at him and smiles warmly, gesturing for him to follow her. Beyond her he can see a large room with walled cubicles running off a corridor lined with lots of coloured bins. In the distance there seem to be swarms of young dentists wandering around, or standing together in intimidating groups. He switches his mobile off, stands up, takes a deep breath, and starts the long walk.

1.1 Introduction

This thesis is an exploration of the encounter between anxious patients and treating clinicians within University-based secondary care conscious sedation clinics (SCSCs). By examining participants' accounts, this research thesis investigates the interpretations, medical work and outcomes of such technology. This chapter

provides the research background. It introduces secondary care conscious sedation¹ provision through a description of the clinics, outlining the pertinence of the research problem and the approach taken to address it, before concluding with an outline of the thesis structure.

1.2 Dental Anxiety and Sedation

Dental anxiety and phobia is a psychological problem with a variety of stimuli and aetiologies (Locker, Liddell and Shapiro 1999b; McNeil and Berryman 1989). Although measurements of prevalence vary depending on population and measuring scale, the worldwide prevalence of high dental anxiety- defined as >19/25 on the Modified Dental Anxiety Score (Humphris *et al.* 2009), is between 4-12% of the population (Eitner *et al.* 2006; Hagglin *et al.* 1996; Hakeberg *et al.* 1992a; Humphris *et al.* 2009; King and Humphris 2010; McGrath and Bedi 2004; Moore *et al.* 1993; Nicolas *et al.* 2007; Nuttall *et al.* 2011; Vassend 1993; Wisløff *et al.* 1995; Woodmansey 2005).

Dental anxiety has a significant impact upon patients and primary care dentists. It affects many aspects of patients' lives, and is associated with a reduced quality of life (McGrath and Bedi 2004). It is linked with increased dental disease, and has social impacts such as affecting food-related behaviours, sleep, work, relationships, and social and leisure pursuits (Abrahamsson *et al.* 2002b; Abrahamsson *et al.* 2000; Berggren 1993; Cohen *et al.* 2000; Kent *et al.* 1996; Locker 2003). Patients experience a vicious circle of avoidance, reduced oral health and quality of life, traumatic emergency treatment, and consequent reinforcement of anxiety (Armfield *et al.* 2007). For primary care dental professionals (PCDPs), anxious patients represent a demand in emotional energy, finance and time (Hill *et al.* 2008). One

¹ Henceforth called 'sedation' in this thesis.

way for anxious patients to receive dental treatment, is through referral to secondary care sedation clinics (SCSCs).

The treatment available for anxious patients may be psychological (such as behavioural management, cognitive behavioural therapy and graded exposure) in order to affect the underlying anxiety, or pharmacological (such as sedation or general anaesthesia) in order to affect the impact of anxiety (Aartman *et al.* 1999). As there are a variety of underlying causes, treatments must be patient-based (Horst and de Wit 1993; Locker *et al.* 1999b; Moore and Brødsgaard 1995; Moore *et al.* 1991). Exposure-orientated behavioural management is the 'gold standard' for treating dental anxiety, providing greater, longer lasting reductions in dental anxiety than pharmacological techniques (Milgrom 2007). Comparing sedation with behavioural management, Aartman *et al.* (2000) found that anxiety reduction was stable a year after treatment, but greater with behavioural management and inhalation sedation than intravenous sedation. Despite the lack of long term evidence for the efficacy of sedation treatment in affecting the underlying anxiety of patients (Adair *et al.* 2003), the majority of treatment provided following secondary care referral is pharmacological, and primarily via sedation (Boyle *et al.* 2010; McGoldrick *et al.* 2001; Wallace 2006; Woolley 2009).

Perhaps due to the pharmacological nature of sedation provision, previous research has for the most part focussed upon the technological aspects of sedation. Studies have focussed upon the pharmacokinetic and pharmacodynamic aspects of sedation modalities, examining the ability of sedation to safely and successfully facilitate dental treatment. Miller and Crabtree (2005) propose that qualitative research should augment quantitative exploration of the physical effects of treatments upon patients, by exploring their meanings and personal impact. One such study of sedation experience was undertaken by Averley *et al.* (2008) using

focus groups to explore the provision of sedation to children in a non-academic based referral centre. In general, however, the open-ended exploration of patients' experiences has chiefly been ignored. In keeping with other areas of biomedical research, social science based studies have been asymmetrical in their (in)attention to staff (Graham 2006), and the voices of sedation staff themselves are conspicuous by their absence².

1.3 Secondary Care Sedation Clinics

SCSCs are clinical areas dedicated to the provision of dental treatment for anxious and phobic patients who require additional pharmacological and psychological support to enable treatment. Although clinics vary from site to site, they typically comprise of multiple dental units within 'polyclinics'- large clinics which have smaller dental units within them, separated by mid-height walls (See Figure 1.1). Such clinics contain the facilities to provide inhalation of nitrous oxide and / or intravenous midazolam, as well as monitoring equipment for all patients undergoing treatment. SCSCs may have dedicated premises as actual physical clinics, or may use general premises as abstract 'clinics'³.

² Apart from the Letters section of the BDJ.

³ That is, the collection of staff, techniques, technologies and approaches which a physical clinic embodies but as an itinerant set-up without a full-time dedicated space.



Figure 1.1 A typical poly-clinic.

Treatment is carried out within SCSCs by a variety of clinicians with varying levels of experience. Different academic centres have provided dedicated sedation services for differing lengths of time, however since the publication of A Conscious Decision (ACD) (DoH 2000) a concerted effort has been made by dental schools to meet GDC educational requirements. In fulfilment of the undergraduate curriculum's learning outcomes in pain and anxiety control, students receive theoretical and practical training in the provision of treatment under sedation (GDC 2002). This involves experience in assessment, and treatment provision under inhalation and intravenous sedation within their abilities (DSTG 2000), although the amount of exposure students receive varies between academic centres (Leitch and Jauhar 2006; Leitch and Girdler 2000). In addition to student treatment, care is provided by members of staff, some of whom are employed wholly within the hospital service. Others work part-time on the clinics in addition to community posts, or are primary care dental practitioners (PCDPs) working part-time on the clinics or undergoing

clinical attachments to develop their sedation skills. Clinicians are supported by qualified dental nurses who have undertaken an additional qualification in sedation, or by trainee dental nurses supervised by qualified dental nurses.

1.4 The Technical Provision of Sedation

SCSCs' local organisation and procedures vary, but they have similar generalised characteristics. The following section outlines the general process of an appointment in order to orientate the reader. This is a thumbnail sketch of the activities undertaken from beginning to end, and therefore (as will become apparent through this thesis) glosses over the variety of work undertaken to make treatment a 'success'.

Attending patients report to the clinics' reception desk, before sitting outside in a waiting area until they are called by a nurse or clinician⁴. Whilst walking to the chair, the SCDP makes general enquiries about them, their journey and parking etc. If the SCDP is a nurse, the treating clinician that patients subsequently encounter at the dental chair introduces themselves, and makes similar small-talk before outlining the planned treatment for the appointment. Verbal agreement for this is then given by the patient. The patients' medical histories are checked, and if their appointment involves intravenous sedation the presence of a competent escort to take them home in private transport afterwards is also confirmed. The presence of a written consent form, the patients' previous day's alcohol and drug intake and their recent food intake are also checked. When pre-sedation background checks are deemed acceptable or addressed, the patients' blood pressure is taken. If after these verbal

⁴ Both are encompassed in the subsequent umbrella title of Secondary Care Dental Professional (SCDP).

and physical checks they are felt to be medically suitable, then the sedation is provided.

For patients having treatment with intravenous midazolam, a tourniquet is applied and a suitable vein is located (usually on the dorsum of the hand or in the antecubital fossa). A cannula is placed into the vein and secured after correct placement is checked with saline. A pulse-oximeter probe is then placed on one of the patient's fingers on the opposite arm, and the midazolam solution is gradually injected through the cannula at a rate of 1mg per minute⁵, until they exhibit signs of moderate sedation and a willingness to have treatment (see Figure 1.2).



Figure 1.2 A patient having intravenous sedation with midazolam

Nitrous oxide is a 'lighter' form of sedation than midazolam (Meechan *et al.* 1998), constantly introduced under positive-pressure, and effectively eliminated from the patient's blood stream after 3 minutes of 100% oxygen. Consequently its use relies more heavily upon not only a calm clinical manner, but also continuous 'hypnotic'

⁵ This rate is for a healthy adult, and is changed for patients over 60 or with complicating medical conditions.

suggestive words about experience and mental attention from the clinician (Girdler *et al.* 2009; Meechan *et al.* 1998). For patients having treatment with nitrous oxide ('gas and air'), a small mask ('nasal hood') connected by pipes to a machine, is placed over their nose (see Figure 1.3). Oxygen is pumped through the pipes (which also suck away exhaled gases) at approximately 6 litres per minute (adjusted to suit the patient). When patients are comfortable breathing in and out through their nose, the mix of nitrous oxide and oxygen is changed in increments every minute until they appear visibly relaxed and are willing to have treatment. The mix is then generally kept at this level for the duration of treatment depending on the treatment and the patient's individual requirements.



Figure 1.3 A patient having nitrous oxide inhalation sedation

Once patients are sufficiently sedated, dental treatment is started. Upon completion, inhalation sedation patients are given 100% oxygen for three minutes to encourage the removal of nitrous oxide from their blood stream. Intravenous patients are kept under observation until the midazolam has been sufficiently metabolised and they are showing signs of alertness. If the patient is sufficiently alert to go home, their cannula is then removed. After treatment, a discussion takes place between

clinicians and patients and their escorts about the dental treatment they have had during that appointment and their experience of the sedation. Patients are then booked a new appointment before they leave.

1.5 The Problem of Sedation Provision

On first consideration, the problem of sedating anxious adult patients seems to be a pharmacological one. Indeed this is the problem that much of the literature seeks to address by examining the efficacy of different sedation modalities, their effects and side-effects and their duration. However, the social nature of dental treatment indicates a deeper problem beyond one of biochemical efficacy- *how* will it be made to work? This is more than the observable effects of the pharmacokinetics / dynamics. It is the problem of the *process* of sedation provision. Clarke and Fujimura (1992a) illustrate how tools and jobs are both manipulated to make them 'right' for each other. The initial question instigating this research sought to address this social aspect of sedation treatment, by understanding in general terms the 'situation' (Blumer 1969; Clarke 2005) of secondary care sedation provision:

“How do patients and dentists engage with conscious sedation provided in University-based Secondary Care Sedation Clinics?”

This question is affected by two sociological insights. The first is the impact of interpretation and classification upon situations, as definitions have consequences (Thomas and Thomas 1928). Sedation involves both lay and biomedical interlocutors, each engaging with sedation from a particular cultural background. The second is the analysis of medical work, which has demonstrated the breadth of activities which are undertaken during a medical trajectory (cf. Atkinson 1995; Nettleton 2006b; Strauss *et al.* 1985 [1997] amongst many others). Given these assertions, the research questions were expanded following analysis of pilot

interviews, to consider SCSCs as sites of enactment as well as engagement with the technology of sedation. Consequently, subsidiary questions were developed (See Figure 1.4).

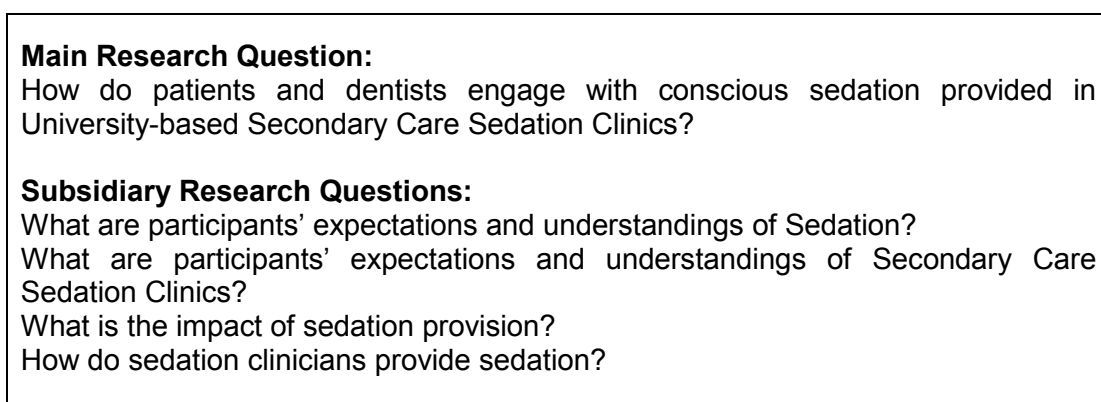


Figure 1.4 The research questions

This thesis addresses the relative neglect of attention to the process of sedation provision by exploring the interpretations, work undertaken, and outcomes of treatment. By considering both patients' and clinicians' accounts of 'medical work', it seeks to provide a more symmetrical analysis of the biomedical encounter than medical sociology has traditionally undertaken (Atkinson 1995; Graham 2006). In doing so, it also attempts to contribute to deficiencies in the dental and sociological analysis of dentistry (Exley 2009).

1.6 The Choice of Research

Rather than standing outside the situation objectively, the researcher is a significant part of the research (Hammersley and Atkinson 2007). Their choice of focus, and the aspects of a research setting deemed pertinent are not objective decisions, but influenced by their biography and experience (Gadamer 1975 [2004]; Mays and Pope 1995; Midgley 2004). Koch (1996) argues that choices made both in a study's initiation and process should be explained and explicated, as such an 'audit trail'

can clarify the process and establish trustworthiness in its outcomes. Biography is therefore important in allowing researchers to identify elemental aspects of the research process, and the reader to assess the reflexive nature of the research (Silverman 2010).

My interest in the process of secondary care sedation provision for anxious patients stems from my biography and personal experience of working within a SCSC. Having been interested in the treatment of anxious patients from my experience of such patients during my undergraduate training⁶, I consequently pursued postgraduate training and experience in treating anxious patients with sedation within secondary care. Over the past eight years, I have worked as a member of staff within the Sedation Suite at the University Dental Hospital, Cardiff, and as part of my continued professional development have sought to expand my understanding of dental anxiety and its successful pharmacological and psychological management. The initial idea for the research question came out of this background, and was focussed by experiences I had whilst treating anxious patients. During an appointment with one phobic patient I treated, I questioned whether they had ever considered looking at the cause of their fear, and whether they had considered cognitive behavioural therapy (CBT) as this has been shown to be effective in removing dental phobia. This discussion was undertaken in an open and permissive way, as mental health services are at risk of misunderstanding and stigma. At the time the patient seemed willing to consider the suggestion and did not appear to be offended by it, yet I subsequently learned that she was unhappy as I had “said she was ‘mental’”. Two other patients also discussed the benefits of psychological treatment and the ideal of reducing the need for sedation with me. Both patients expressed a great deal of interest at the time of their appointments,

⁶ The Sedation Suite at Cardiff School of Dentistry did not exist whilst I was training, but I came across anxious patients during my training.

but never moved beyond professing a desire to explore phobia treatment, to actually pursuing it, nor to reducing their sedation levels to engage more with the treatment process. I realised that there were two different agenda operating in these consultations: some patients seemed just to want immediate oral health improvement, whilst I wanted to meet that immediate need *and* to help them to no longer depend upon me for treatment.

Such a conflict raises the question, “What are SCSCs for?” Are they simply for treating anxious patients’ mouths, or are there more holistic agenda? Who defines ‘successful treatment’, and how is it achieved? Such questions would remain unanswered, had an initial research project into an alternative sedation agent not fallen through. Consequently I found myself with a new supervisor who was interested in using the sort of qualitative research methods which enabled an attempt at exploring these questions.

1.7 The Theoretical and Methodological Approach

The underlying theory of knowledge which influences the methodology, and therefore method, of this study resembles critical realism (Archer *et al.* 1998; Danermark *et al.* 1997)⁷. Critical realism assumes a realist ontology and relativist epistemology- things really exist but can only be partially known; we see through a glass darkly. This partial knowledge is open to an hermeneutical updating process, which seeks to improve understanding but is never-the-less always conditional and provisional (Bhaskar 2008 [1975]). Such an approach is ‘interpretivist’ (Bryman 2004), acknowledging that a researcher’s provisional understanding of others and

⁷ Also called ‘transcendental realism’ (Bhaskar, 1979), or ‘subtle realism’ (Hammersley ,1992). I say “resembles” because that is the underlying philosophical approach to knowledge most similar to mine. Whilst “critical realist” in my philosophy, I am not so in terms of adherence to that particular method of inquiry (Archer *et al* 1998, Danermark *et al* 1997). The philosophy, but not the method has scaffolded this research.

their perceptions is guided by both the others' interpretation of experience, and the researcher's subsequent interpretation of that. To prevent facile, shallow, or imposed interpretations requires an inductive, iterative and reflexive approach. Self-knowledge increases through a reflexive process which is integral to qualitative research, and knowledge of others increases through dialogue and enquiry leading to a '*fusion of horizons*' (Gadamer 1975 [2004], p. 367).

The research is informed by a Symbolic Interactionist perspective. Developed from the work of George Herbert Mead (1934), such an orientation asserts that individuals act towards things based upon their meaning; that such meanings are derived from social interactions; and significance is developed through interpretation (Blumer 1969). Symbolic Interactionism therefore proposes that although an independent 'real' world exists, it cannot be objectively known but is subjectively understood through exploration and interpretation (Atkinson and Housley 2003; Denzin 1989). Such an approach allows interpretation to be as important as the 'reality' (Thomas and Thomas 1928). A particular development of Mead's analysis of 'the Self' (1934) related to the significance of interpretation, is an awareness of the performative nature of social interaction (Goffman 1959 [1990]).

Symbolic Interactionist orientations have been useful in exploring the social nature of medical work such as its inherent identities, roles, practices and technologies (Baszanger 1998a; Casper 1998; Clarke and Montini 1993; Friese 2007; Sinclair 1997; Strauss *et al.* 1982; Strauss *et al.* 1985 [1997]). Symbolic Interactionism's proposition that interpretation affects and is affected by interaction is an ideal theoretical perspective from which to examine the interaction of different individuals with medical technology, and more specifically to explore the use of sedation.

Given the social and interactional nature of sedation provision, the use of sociological and anthropological theories may provide insight into the processes that are at work during such treatment. The discussion of a dental process using social science paradigms places the research at risk of 'falling between two stools', neither satisfying dental nor social science audiences (Gibson 2002). In keeping with its roots in natural science, dental research traditionally follows an IMRAD structure⁸. Such an approach has a literature review at the beginning, setting the scene for the subsequently reported research process. In contrast, whilst the qualitative research process within social science may be clarified in an IMRAD structure, it is an accepted practice to interweave social theory as it pertains to relevant data (Atkinson 1997; Coffey 1993; Pugsley 1998; Salisbury 1994) rather than separate background, data and analysis. In order to bridge the gap between such incommensurate approaches, within this thesis I shall discuss dental and social science literature from the outset within the literature review, but will explicate and discuss social theories as they pertain to the data under discussion in later chapters. An eclectic approach to social theories has been taken, avoiding the need for a grand narrative and allowing a specific understanding of the situation (Denzin and Lincoln 2005a). To explore some of the themes identified in the data, use is made of boundary theories (Fujimura 1987; Gieryn 1983; Guston 1999, 2001; Star and Greisemer 1989), Turner's work on liminality (1964, 1967, 1969 [1995], 1974, 1977, 1979, 1982), theories of encounters and self-presentation (Goffman 1959 [1990], 1961, 1967; Hochschild 1979, 1983) and analysis of medical work (Strauss *et al.* 1982, 1985 [1997]).

⁸ I.e. research is written with an Introduction and literature review at the start to provide the background, before Methods, Results And Discussion sections which subsequently use literature introduced in the Introduction.

1.8 The Reflexive Approach

Whilst I attempted to avoid a deductive approach of 'entering the field' with a theory in mind to test, as implied earlier the research was guided by '*foreshadowed problems*' (Malinowski 1922, p. 7) and '*working hypotheses*' (Geer 1964, p. 384) derived from my personal experience and a review of the literature. Participants' interpretations of sedation technology, its intended purpose, and the outcomes for both patients and clinicians of engaging within SCSCs were areas of interest that I wished to investigate. The concepts examined in this thesis however were grounded in the participants' data rather than forced upon them (Glaser 1992; Glaser and Strauss 1967; Strauss and Corbin 1998). Consequently, whilst such questions have continued from inception to conclusion in some form, shaping the layout of the thesis for clarity of discussion, some aspects of concern were discarded due to a lack of evidential support whilst others developed following their 'discovery' in the data (Glaser and Strauss 1967).

The argument discussed in this thesis is illustrated using data from participants. Whilst limited numbers of participants' data are presented, the concepts they illustrate are representative of those present throughout the sample as the analysis was developed through constant comparison. Data from both patients and clinicians are provided within chapters rather than separating them out. This allows for a form of 'triangulation' (Denzin 1989) between accounts of phenomena discussed to add '*rigor, breadth, complexity, richness, and depth*' (Coffey and Atkinson 1996, p. 14). For example, in Chapter 7, both the SCDPs' reported act of physical risk management and the patients' experience increase understanding of the process of managing physical risk.

This thesis has several conventions carried throughout in order to clarify participants and 'voices'. The body of the text is provided in double-spaced Arial font. Where quotations are provided, both literature and participants' voices are depicted in single-spaced *italicised Arial* font. Throughout the study, conscious sedation is referred to as simply 'sedation'. In general dental discourse, undergraduates are differentiated from their supervising clinical staff members, by their differing levels of competence, experience and autonomy. Within the thesis, differentiating labels are used where appropriate, for example when comparison is made between staff or students. Discussion of either students or staff is, on occasion, amalgamated within the term 'clinicians' where differentiation is superfluous. Similarly, the differentiation between dental surgery assistants (dental nurses) and dentists is brought under the label of Secondary Care Dental Professional (SCDP) for three reasons: firstly such labels continue a divide between different members of staff which, when analysing work undertaken, may be either an expression of bias or overstated generalisation (Strauss *et al.* 1985 [1997]). Secondly, like a game of Guess Who, by identifying characteristics of participants it might make others' identification possible given the relatively small world of University-based SCSCs. Finally, apart from one event discussed in Chapter 7, SCDPs presented rhetoric of equality both on and off the record. Whilst this might be questioned as part of a public account, from personal experience such a stance is actually an integral part of the culture generating / generated by SCSCs and so I chose to reflect this in the way I represented the data.

This research was undertaken using participants from five secondary care sedation locations, in order to provide more 'transferable'⁹ (Lincoln and Guba 1985) outcomes of the study and to ensure anonymity of participant locations.

⁹ Transferable findings are of potential use by other sites. Generalisable findings ignore local contingencies.

1.9 Thesis Layout

This section provides a summary of the thesis layout and a summary of each chapter to guide the reader by mapping out the trajectory of sedation treatment.

Chapter 2 considers the dental and social science literature that form the background to this study. To aid clarity, it examines each academic field separately, with each having a relevant summary.

The first section provides a biomedical account of dental anxiety and conscious sedation provision. It examines the characteristics and impact of dental anxiety before exploring the literature regarding the development, need, demand and supply of sedation treatment to address anxiety. The second section discusses the social science theories related to frontiers, exploring the processes and structures which define and blur such interfaces and which occur in the 'space' between them.

Chapter 3 documents, and is reflexive about, the research process. It reiterates the research questions and explains how they were addressed. This study is based upon semi-structured interviews regarding the work of treating anxious adult patients. By addressing SCSCs 'sides' symmetrically, it brings together both lay and professional accounts and voices.

The subsequent five chapters draw upon data to discuss the work of SCSCs. Although not focusing solely upon patients' experiences, the chapters are structured in a chronological order reflecting the trajectory of treatment in order to provide clarity.

Chapter 4 examines the reported 'purpose' of SCSCs from the perspectives of both patients and clinicians. It concludes that SCSCs provide a hosting role to its attendant worlds, and can be considered as clinical forms of 'boundary organisation' (Guston 1999, 2001) - mediating parties which join two incommensurate 'worlds' and use the 'standardised package' (Fujimura 1988, 1992) of sedation to achieve this. Previously only applied to the policy-science interface, SCSCs have the same characteristics and functions as other boundary organisations, but apply them to the lay-clinical-education interfaces.

Chapter 5 Looks beyond the perceived purpose of SCSCs, to examine the process of their use. It examines sedation provision in light of Goffman's (1959 [1990]) dramaturgical metaphor of 'the presentation of self'. It frames both the clinic and the treating clinicians as a 'set' and 'actors' performing sedation, in a literally theatrical sense, to outwardly demonstrate through their appearance and demeanour the internal attitudes and approaches described in the previous chapter. This 'facework' (Giddens 1990, p. 80; Goffman 1967) is intended to develop trust in the 'abstract system' of dentistry that SCSCs are an 'access point' of. However, the 'emotional labour' (Hochschild 1983) required involves the management of 'emotional contagion' (Levenson 1996; Omdahl and O'Donnell 1999), a risk factor in staff burnout. By discussing the emotional impact of sedation provision upon staff members, the chapter addresses lacunae in medical sociology- a sociological examination of dentistry and a compassionate analysis of the impact of biomedical work on the profession (Exley 2009; Graham 2006).

Chapter 6 explores some of the 'back-stage' work of sedation, focussing upon how providers adapt its use. It demonstrates that the use of sedation technology is not a neutral activity, but requires additional work which is rendered invisible in accepted definitions of sedation provision. Such work overcomes disruptions to the treatment

trajectory caused as a consequence of the sedation technologies' biochemical and social impact. It requires the management of escorts, chemical side-effects of the drugs, and a flexible approach to sedation use and dental treatment provision. These approaches *make* sedation 'The Right Tool for The Job' (Clarke and Fujimura 1992a).

Chapter 7 Having identified that the 'front-stage' work in sedation treatment contains risk, this chapter examines the 'back-stage' management of SCSCs' inherent risks. It considers the physical risk of sedation provision and how this relates to the professional risk of dentistry losing control of sedation to a rival profession (anaesthesia). By discussing this relationship, physical risk management is shown as a form of 'boundary work' (Gieryn 1983). In addition to these interlinked risks of the technology, it considers the process risks of treatment within SCSCs. In light of their previously described identity as boundary organisations, the risk of work delegation to inferior (undergraduate) providers, and the risk of providing *too good* a service leading to the abdication of personal responsibility by patients are discussed.

Chapter 8 examines the impact on patients of engaging with dentistry via SCSCs. It uses the anthropological concepts of 'liminality and liminoidity' (Turner 1969 [1995], 1982) to identify the transformative or merely experiential nature of sedation treatment, and the outcome of the process of discharge previously described as a risk management strategy in Chapter 7.

Chapter 9 unites the form and functions of SCSCs identified in the previous four chapters by using the metaphor of the Victorian parlour. The chapter proposes the Parlour as a novel simile for analysis of biomedical clinics. It illustrates this concept through the SCSC exemplar, before speculating upon potential areas of application

to understand the work of other clinical settings. The chapter then examines the research process, reflecting upon the research experience before concluding by considering the implications of this research for clinical care as well as potential areas of future research.

Chapter Two - Literature Review

2.1 Introduction

This chapter examines the biomedical literature regarding the use of conscious sedation for dental anxiety within the United Kingdom, and the social science literature related to boundaries and frontiers. It begins by examining the characteristics and impact of dental anxiety, before concentrating upon the literature regarding conscious sedation to address those effects. After summarising the pertinent biomedical literature, the chapter explores the processes and structures which operate at the boundaries and frontiers between different social groups. By exploring such concepts, this chapter identifies a gap in the current knowledge related to frontiers - the hosting of one world within another.

2.2 Dental Anxiety

2.2.1 Introduction

Dental anxiety is a fear response to dental stimuli¹⁰. It is multi-factorial in aetiology, with a variety of stimuli (Locker *et al.* 1999b; McNeil and Berryman 1989), and may be related to experience and modelling (Skaret *et al.* 1998); psychodynamically transferred from alternative sources (Freeman 1998); a form of social phobia (Moore and Brødsgaard 1995); or related to post-traumatic syndromes and symptomology (Bracha *et al.* 2006; de Jongh *et al.* 2002; de Jongh *et al.* 2003). Dental anxiety can be either endogenous (i.e. a constitutional predisposition) or exogenous (i.e. due to conditioning and vicarious learning) in origin (Locker *et al.*

¹⁰ Despite a technical difference in terms, dental anxiety, fear and phobia are often used interchangeably in the literature. Within this thesis, anxiety has been used to describe all three terms.

1999a), and has been shown to relate to perceptions of control (Abrahamsson *et al.* 2001; Armfield 2008; Armfield 2010; Armfield *et al.* 2008; McNeil and Berryman 1989; Moore *et al.* 1991; Poulton *et al.* 2001; Stalker *et al.* 2005).

2.2.2 The Prevalence of Dental Anxiety

There are at least ten different instruments for measuring adult dental anxiety (Newton and Buck 2000). Horst and de Wit's (1993) review of behavioural science publications between 1987 and 1992 concluded that comparison of dental anxiety world prevalence studies is impossible due to the variety of samples, scales, and ways in which the data are presented (i.e. mean of sample or incidence of category). In addition, the recognition of patients as dentally anxious is affected by the bar set for definition on any one particular scale (Haugejorden and Klock 2000; Humphris *et al.* 2009) (i.e. more patients will be counted as anxious if the bar is set lower on a scale. For an example see Oosterink *et al.* 2009, Table 1). Despite this incomparability, such collations of data have been published (see Table 2.1), and although a significance in the differences between populations should not be drawn they serve to illustrate that dental anxiety affects a considerable number of individuals (Pretty *et al.* 2011).

Country	Level of high dental anxiety/fear (%)
Japan	20.9
Singapore	7.8 - 20.8
Denmark	4.2
Iceland	4.8
Netherlands	3.9 - 10.8
Sweden	3.9 - 6.7
Australia	13.7
New Zealand	12.5 - 21.1
United States	10 - 19
Canada	5.5
Mean (conservative)	8.72 (\pm 5.6)

Table 2.1 Prevalence of dental fear and anxiety internationally

Within the United Kingdom the Modified Dental Anxiety Scale (MDAS) (Freeman *et al.* 2007; Humphris *et al.* 2009; Humphris *et al.* 1995; Humphris *et al.* 2000; King and Humphris 2010) is commonly used to determine anxiety on a clinical basis. It was developed from Corah's Dental Anxiety Scale (DAS) (Corah *et al.* 1978) to give greater reliability throughout the whole score range and to be sensitive to needle-phobia related dental anxiety. Like the DAS, patients are asked to rate their anxiety to scenarios on a Likert-scale¹¹. Moderate anxiety is defined as a score between 12-18/25, and MDAS has an empirically set bar of >19/25 indicating a probability of high dental anxiety (Humphris *et al.* 2009) which correlates with the diagnosis of dental phobia (King and Humphris 2010). Conversion algorithms have been developed to enable comparison with the DAS (Freeman *et al.* 2007), and the reported prevalence of high dental anxiety ranges from 3.7 to 11.6 percent (see Table 2.2). Within the United Kingdom (UK) high dental anxiety is present in approximately 12% of the population (Humphris *et al.* 2009; Nuttall *et al.* 2011).

¹¹ The range of scenarios was increased to five from four, and the answers uniformly worded to increase clarity. Respondents consequently score between 5-25/25. A score of 5/25 indicates that they do not feel anxious in any of the scenarios, whilst 25/25 indicates that they would feel extremely anxious in all of them.

	Country	Prevalence
(Moore <i>et al.</i> 1993)	Denmark MDAS ≥ 18 (DAS ≥ 15)	4.2
(Nicolas <i>et al.</i> 2007)	France MDAS ≥ 18 (DAS ≥ 15)	7.3
(Eitner <i>et al.</i> 2006)	Germany MDAS ≥ 18 (DAS ≥ 15)	4.6
(Facco <i>et al.</i> 2008)	Italy MDAS ≥ 18 (DAS ≥ 15)	10.3
(Vassend 1993; Wisløff <i>et al.</i> 1995)	Norway MDAS ≥ 18 (DAS ≥ 15)	3.7 – 4.2
(Hagglin <i>et al.</i> 1996; Hakeberg <i>et al.</i> 1992a)	Sweden MDAS ≥ 18 (DAS ≥ 15)	3.9 – 5.4
(Humphris <i>et al.</i> 2009; King and Humphris 2010; Nuttall <i>et al.</i> 2011) (McGrath and Bedi 2004)	UK MDAS ≥ 19 MDAS ≥ 18 (DAS ≥ 15)	11.2 - 12 10.6
(Kaaka <i>et al.</i> 1998; Woodmansey 2005)	US MDAS ≥ 18 (DAS ≥ 15)	4 - 9

Table 2.2 Prevalence of dental anxiety based on MDAS and converted DAS scores

2.2.3 The Impact of Dental Anxiety on Dental Practitioners

Dentally anxious patients significantly impact treating clinicians. Studies examining UK dentists' stressors rate anxious patients within the top ten (Cooper *et al.* 1987; Humphris and Cooper 1998; Wilson *et al.* 1998). Time constraints are the most significant stressors, and although anxious patients cause less stress than running late, they disrupt the work-flow, thereby creating time demands (Moore and Brødsgaard 2001; Vassend 1993). In a survey of UK general dental practitioners regarding the treatment of anxious patients (Hill *et al.* 2008), 91% of respondents reported feeling stressed when treating anxious patients. They were perceived as taking more time to treat, and concerns were raised that this extra demand is not remunerated within the NHS General Dental Service contract (DoH 2006). A similarly high anxiety about anxious patients was also reported by American dentists, with approximately 80% feeling anxious with anxious patients. (Corah *et al.*

1985), although this was higher than reported in an earlier study (O'Shea *et al.* 1984).

2.2.4 The Impact of Dental Anxiety on Patients

Dental anxiety has been shown to affect several areas of patients' lives in a mutually reinforcing cycle (Armfield *et al.* 2007; Berggren 1993) (see Figure 2.1).

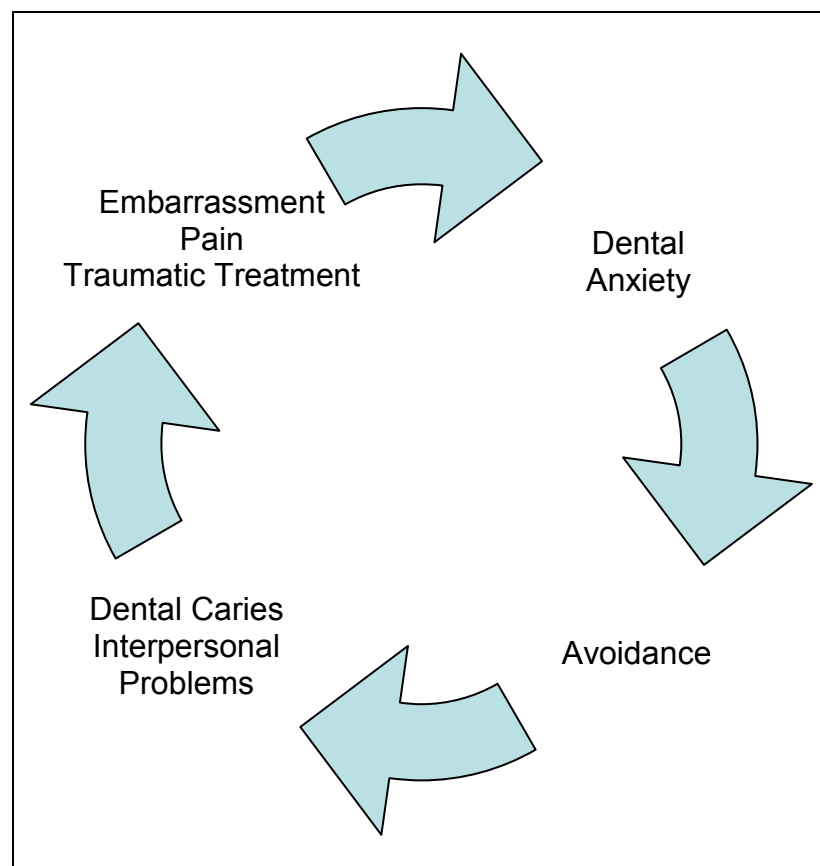


Figure 2.1 The dental anxiety vicious cycle (adapted from Armfield *et al.* 2007; Berggren 1993)

Dental anxiety is associated with avoidance (Goodwin and Pretty 2011; Mejía *et al.* 2010; Nuttall *et al.* 2011). In a large telephone survey of 12,392 Australian adults, Mejía *et al.* (2010) examined whether anxiety is associated with avoidance or causative of it, and having controlled for other factors found anxiety to be directly causative of poor dental attendance. As well as postponement and avoidance,

anxiety influences patients' approaches to dentistry, affecting whether they are occasional problem-motivated or regular-frequency attendees. These findings were confirmed by similarly sized UK studies. Goodwin and Pretty (2011) found dental anxiety to be the commonest barrier to attendance. The 2009 Adult Dental Health survey found that over twice as many adults who had last attended a dentist over a decade previously or who only attended when forced to by dental problems had MDAS scores of 19, than those who had attended within the previous year or were regular attendees for check-ups (Nuttall *et al.* 2011). In a qualitative study, Abrahamsson *et al.* (2002b) found three areas of avoidance: physical avoidance of professional dental care; avoidance of information about their teeth (including visual and tactile feedback from their own dental care); and mental avoidance of the issue by suppressing any thought about it.

By avoiding physical, informational and mental aspects of dentistry patients place themselves at risk of preventable and unaddressed dental caries, and the ironic consequence of avoiding dental treatment is the increased need for treatment as a result of dental disease (Pohjola *et al.* 2007). In a survey of a Norwegian general population, dentally anxious patients reported less frequent dental visits and a significant increase in decayed surfaces and teeth and missing teeth was noted (Schuller *et al.* 2003). Studies from different countries have all demonstrated increased numbers of decayed or missing teeth associated with anxiety (Abrahamsson *et al.* 2001; Armfield *et al.* 2009; Cohen *et al.* 2000; Hagglin *et al.* 1996; Hakeberg *et al.* 1993b; Kauffman *et al.* 1992; Nuttall *et al.* 2011; Ragnarsson 1998; Ragnarsson *et al.* 2003; Schuller *et al.* 2003; Wisløff *et al.* 1995).

Oral health has a significant impact on anxious individuals, as in addition to fear of remedial treatment the consequences of dental disease are also perceived as preventing them from being able to problem-solve and subsequently handle their

fear (Abrahamsson *et al.* 2002b). Pain and appearance affects individuals' food-related behaviours, sleep, work-life, relationships, and social and leisure pursuits (Abrahamsson *et al.* 2002b; Abrahamsson *et al.* 2000; Berggren 1993; Cohen *et al.* 2000; Kent *et al.* 1996; Locker 2003), and reduces general and oral health related quality of life (Abrahamsson *et al.* 2001; McGrath and Bedi 2004; Mehrstedt *et al.* 2007). The deterioration of their dentition may lead to personal and social embarrassment, and this can form part of a general anxiety related to dentistry which involves negative self-opinions, poor self image and feelings of self-punishment which amplify the anxiety (Moore *et al.* 2004) thus closing the vicious cycle.

2.2.5 Managing Dental Anxiety

Dentally anxious patients have an '*approach-avoidance conflict*' (Milgrom *et al.* 1995, p. 7) and are ambivalent about dealing with their dental anxiety, feeling a tension between the need to avoid dentists and a willingness to act (Abrahamsson *et al.* 2002b). In a qualitative study of anxious patients, Abrahamsson *et al.* (2002b) found this willingness to act is influenced by, and has consequences for, their self-respect and well-being. The negative impact that anxiety has upon patients' lives was recognised by them, and they expressed a readiness to address this by utilising problem solving strategies, social support and their belief that they had the potential to overcome their fear. However, they oscillated between wanting to overcome their fear, and being overcome by it. As a consequence a few participants expressed the desire to '*sleep through it*' (the dental care) (p. 661) thereby seeking to address the dental impact without addressing the underlying anxiety.

Anxious individuals may need external help to allow them to cope with their dental fear. In a non-clinical setting this may involve accessing online groups to seek information and support (Buchanan and Coulson 2007; Coulson and Buchanan 2008). The clinical management of patients with dental anxiety can involve a variety of modalities which may be psychological (such as behavioural management, cognitive behavioural therapy and desensitisation), or pharmacological (such as conscious sedation or general anaesthesia) (Aartman *et al.* 1999). Kent (1997) argues that anxiety should be perceived as located in the dentist:patient relationship rather than just the patient and their perceptions¹², and dentists' behaviour is therefore as important as the patients' interpretations and anxieties. Both psychological and pharmacological management of anxious patients build upon a foundation of relationship.

2.2.5.1 The Importance of the Dentist:Patient Relationship

The relationship between clinicians and patients is extremely complex. In addition to investigating, diagnosing, prescribing treatment, reviewing and giving advice, dentists undertake invasive treatment in a socially loaded and sensitive part of the body. Consequently the communication and interaction between dentists and patients can have a significant impact on the development and maintenance of dental anxiety (Kleinknect *et al.* 1973; Sondell and Söderfeldt 1997). Heavy handedness, appearing critical, distant and inconsiderate or being busy and rushing are considered the worst characteristics for a dentist (Berggren and Meynert 1984). In a retrospective study Bernstein *et al.* (1979) found that half of the patients with high dental anxiety reported negative experiences of dental staff, who were recalled

¹² Although not part of this literature review, see Nettleton (1989, 1992) for a discussion of the development of dental anxiety as a socially located object. Nettleton's Foucaultian ethnography of dentistry traces the development of dental fear reported in the literature, noting its movement from the patient to the '*social space which surrounded and transcended the mouth and the patient*' (1992, p.65).

as impersonal, nasty, uncaring, incompetent, disinterested, cold, careless, rough, nervous, or mean. Moore *et al.* (1993) found that negative dentist behaviour was approximately 5 - 10 times more likely to be reported in dentally anxious individuals.

Good interactions between dentists and patients are therefore essential. Trust in the dentist and dental environment prevents traumatic experiences becoming generalised (Milgrom and Weinstein 1993). A non-anxious relationship is required for satisfaction and compliance, and is achieved through communication, empathy, a calm manner and encouragement (Sondell and Söderfeldt 1997). Patients who had good dentist experiences reported individuals who clearly expressed interest and concern such as enquiry, explanations and smiling (Bernstein *et al.* 1979). Answering questions and demonstrating understanding, competence, calmness, friendliness and care have been reported as the most desired characteristics for a dentist (Berggren and Meynert 1984). Examining the dentist:patient relationships of dentists who specifically treated anxious patients, Kulich *et al.* (2003) found that the key descriptor of a good relationship was an holistic perception and an understanding of the situation developed from an ability to pick up implicit cues and by synthesising abstract and concrete perceptions. Key facets of this holistic outlook were the dentists' positive outlook on people (humanitarian attitude, relating as equals, showing oneself as a human) and their positive view of patient contact (finding common ground, balancing the relationship with history taking, fitting their attitude to the patients' personality but their role to the situation, and not taking the anxiety or interaction personally). Such an approach, as well as preventing the initiation of anxiety or its mutual transference, can induce relaxation in anxious patients as a form of 'iatrosedation' (Friedman 1983; Sondell and Söderfeldt 1997). An iatrosedative approach builds trust by demonstrating expertise and competence as well as patient-centred attitudes of empathy, ethics, an intention to help and reliability to be consistent and protective. Patients' perceptions are taken seriously,

and time is spent acknowledging, validating, exploring, explaining, and normalising their fear. Empowerment is demonstrated by the joint formulation of the plan for anxiety management, the minimisation of helplessness, dependence and the unknown, maximisation of control and feelings of ability to cope, predictability and the provision of information regarding expectations (Friedman 1983; Milgrom and Weinstein 1993).

2.3 Conscious Sedation for Dentally Anxious Patients

2.3.1 Introduction

The primary treatment option for anxious patients who are unable to tolerate dentistry with behavioural interventions is adjunctive conscious sedation¹³ (Girdler 1996; Wilks 1999). Within the United Kingdom this is defined as

'A technique in which the use of a drug or drugs produces a state of depression of the central nervous system enabling treatment to be carried out, but during which verbal contact with the patient is maintained throughout the period of sedation. The drugs and techniques used to provide conscious sedation for dental treatment should carry a margin of safety wide enough to render loss of consciousness unlikely'
(DoH 2000; DSTG 2000; GDC 2001; NDAC 2006; SAAD 2000; SCSD 2007; SDAC 2002, 2003; UK Academy of Medical Royal Colleges and Faculties 2001; Wylie 1981)

The ideal sedative should be anxiolytic, analgesic, simple and safe to administer, acceptable to both patients and staff, last long enough for treatment yet facilitate quick recovery, be free of side effects or interactions, and be cheap (Meechan *et al.* 1998; Ryder and Wright 1988). The ability to reduce awareness is an ambivalent characteristic as some treatments (e.g. surgical extraction of wisdom teeth) may benefit from amnesia to prevent traumatising patients (Nadin and Coulthard 1997), whilst recollection of others may aid patients' dental education. A reduced state of

¹³ Hereafter called 'sedation'.

consciousness is also not ideal, but is unavoidable as drugs which are anxiolytic are also sedating (Meechan *et al.* 1998).

Sedation encompasses a range of approaches which can be categorised as either standard or advanced techniques (SCSD 2007). The techniques explored in this thesis are the standard techniques of intravenous sedation (of adults) using midazolam alone and inhalational sedation using a titrated mix of nitrous oxide and oxygen. Both are used within SCSCs and are taught to dental undergraduates as part of their degree (DSTG 2003, 2005; SCSD 2007; SDAC 2003).

Nitrous Oxide (N₂O) is an odourless, colourless gas discovered in 1772 by Joseph Priestley and first used for dental sedation in 1844 (Craig and Skelly 2004). In dental sedation, nitrous oxide is delivered by nasal hood¹⁴ in an adjustable mixture with oxygen. The equipment used to deliver this sedative allows different rates of delivery, and manipulation of mix ratios, so that sufficient gas at a suitable concentration can be delivered. This is inhaled and exhaled nasally, and actively scavenged to prevent staff exposure. Concomitant reassuring verbal relaxation is provided by the sedationist (Girdler *et al.* 2009; Meechan *et al.* 1998) which augments the sedative effect (Woolley 2006). The benzodiazepine Midazolam is available in the United Kingdom as 5ml vials of aqueous hydrochloride solution in 1mg/ml concentrations. In intravenous sedation, a cannula is inserted into a suitable vein, usually in the dorsum of the hand or the antecubital fossa. After checking patency with saline, midazolam is titrated at a rate of 1mg (1ml) every minute until the patient is sufficiently sedated to allow treatment (Craig and Skelly 2004; Girdler *et al.* 2009; Meechan *et al.* 1998; NPSA 2008). Both midazolam and nitrous oxide '*begin to approach the 'ideal'*' (Ryder and Wright 1988, p. 212), as they allow

¹⁴ A small mask which only covers the nose, which is euphemistically named to avoid using the potentially emotive meaning-laden 'mask'.

patients to accept dental treatment by inducing relaxation and reducing awareness of what is happening (Meechan *et al.* 1998). In addition, intravenous sedation with midazolam provides anterograde amnesia which prevents retention of any memories of treatment (Dixon *et al.* 1986; Greenblatt 1992; Longman *et al.* 2000; Merritt *et al.* 2005; Nadin and Coulthard 1997; Thompson *et al.* 1999).

2.3.2 The Development of Sedation within the United Kingdom

Sedation practice developed from the use of various general anaesthetic agents at sub-anaesthetic doses (Craig and Skelly 2004). The currently accepted definition of sedation was initially proposed by the Wylie report (1981), and by the 1980s the practice within the UK had essentially stabilised into the use of inhaled nitrous oxide / oxygen mix and intravenous (IV) midazolam previously described, a technique grouping which was formalised as 'standard' in 2003 (SDAC 2003)¹⁵. During the 1990s a succession of reports, reviews and guidelines were published which impacted aspects of dental general anaesthesia (DGA) and sedation (ADA 1990; GDC 1997b; Poswillo 1990; RCA 1999; SAAD 1990; The Royal College of Surgeons of England 1993, 1996). Of note is the Poswillo report which was published in 1990. This examination into the use of dental sedation and anaesthesia used a different definition of sedation, critiquing the Wylie report for relying on central nervous suppression too much and thereby failing to address the underlying anxiety management. It also advocated postgraduate IV training to be part of Vocational Training¹⁶, and for 'interested graduates' to have consolidated their undergraduate experience within 2 years of graduation. The process of developing undergraduate skills in sedation provision, developing interest for

¹⁵ A third modality of oral sedation was described in 2003, and intranasal midazolam is currently accepted as 'standard' but was not introduced until 2007.

¹⁶ Now called Dental Foundation 1, Vocational Training is a year of mentored postgraduate training / employment undertaken by all qualified dentists before they provide treatment within the NHS.

subsequent postgraduate uptake, and the critique of the Wylie definition which this report raised regarding sedation's perception as a pharmacological tool or an anxiolytic adjunct lie at the heart of some of the interpersonal-work undertaken within secondary care sedation services today.

Towards the end of the 1990s, discussion of sedation within the dental press reflected the criticisms of general anaesthesia, debating the safety of sedation and whether single or multi-pharmacy should be available (Bell and Cowpe 1999; Challon 1999; Ellis 1996, 1999; Girdler 1999; Haigh 1999; Liston 1999; Robb and Craig 1999). In an echo of a decade before, the pharmaco-management focus of the discussion also stimulated counter-discussion of the behavioural aspects of sedation provision (Levitt *et al.* 1999; Wilks 1999). In 2000, the Department of Health published '*A Conscious Decision*', which abolished DGA in primary care in 2001. DGA was limited to hospital settings, and sedation consequently became the treatment modality of choice. As DGA was phased out, it was anticipated by ACD's authors that a corresponding increase in sedation provision would replace the lost services. This did not occur to the extent expected, as the increase of sedation was not as big as the decrease in DGAs (Whittle 2000), and this highlighted a potential discrepancy between pharmacological anxiolysis demand and actual need which the ready availability of DGA had possibly previously masked.

2.3.3 The Need for Conscious Sedation within the UK

The need for dental sedation in the general UK population is based upon its ability to make treatment physically or psychologically tolerable, and is therefore affected by patients' proposed treatment complexity/severity, medical status, likelihood of gagging and dental anxiety (Coulthard *et al.* 2011). The assessment of sedation need is difficult to quantify, and tools like the Indication of Sedation Need (IOSN)

(Coulthard *et al.* 2011; Goodwin *et al.* 2012; Goodwin and Pretty 2011; Pretty *et al.* 2011) should be indicative rather than prescriptive as such decision pathways lose subjective patient-specific detail (Berg 1997). Despite this they provide insight into potential service requirements. A study using the IOSN on 603 patients attending four English dental practices (Pretty *et al.* 2011) found that approximately 5% (n=31) were likely to require sedation at some point (see Table 2.3). Further examination of the data demonstrate that approximately 17 high sedation-need patients (2.8%) had very high dental anxiety, and a further 36 (5.9%) patients with a moderate need for sedation (who would not be deemed as needing sedation based on the IOSN) *also* reported a very high dental anxiety. In addition, a further 84 patients (13.8%) reported high levels of anxiety. In a separate large telephone survey of twelve Primary Care Trusts (PCTs) in England, Goodwin and Pretty (2011) found that 2.7% of the population had not attended a dentist in the past 2 years due to dental anxiety. Based on these studies, 5.5% of the population have a high sedation need due to very high dental anxiety (2.8% + 2.7%), a further 5.9% probably need sedation due to very high anxiety¹⁷, and up to 24% of the UK population *may* need sedation based on high or very high levels of dental anxiety¹⁸. The need for sedation specifically to ameliorate dental anxiety is therefore between 2.7 and 24% of the UK population¹⁹.

¹⁷ The combination of figures in these studies reflect the 12% UK prevalence of high anxiety reported in Table 2.2.

¹⁸ This highlights the importance of local detail in large studies. A patient with a high anxiety score but moderate sedation score may be a fit and healthy adult requiring simple dentistry, yet needlephobic. Using the IOSN they would be assessed as not requiring sedation, yet they may only be able to have treatment if they are sedated for the initial local anaesthesia.

¹⁹ This was 62.3 million in mid 2010, the last annual survey analysed (ONS 2011).

Sedation Need Descriptor	Sedation Need	Dental Anxiety				Total
		Minimal	Moderate	High	Very High	
Minimal	No	345	60	0	0	405
Moderate	No	27	32	76	36	171
High	Yes	2	4	8	17	31
Very High	Yes	0	0	0	0	0
Total		374	96	84	53	607

Table 2.3 Sedation need and anxiety severity (adapted from Pretty *et al.* 2011)

2.3.4 The Demand for Sedation within the UK

In a survey-based study of (n=513) adults attending an emergency clinic in the UK, 82.1% of patients with high anxiety levels (scoring >20 as measured by the MDAS) requested treatment with sedation. Forty three percent of patients with moderate anxiety (MDAS < 16) also requested sedation, and of the whole study sample, 56.3% requested treatment with sedation (n=289) (Baker *et al.* 2006). A similar level of demand (56%, n=40) was also reported in a different survey by Allen and Girdler (2005). Care must be taken in applying these results to restorative dental situations, as the patient population in both surveys were attending for emergency dental care (such as extractions or pulpal extirpation to relieve pain) rather than for routine restorative care. Nonetheless, given the high incidence of avoidance which results in such situations, it might be concluded that there is a significant demand for sedation provision. In a national survey of Canadian primary care patients, Chanapong *et al.* (2005) found that interest in sedation varied with both anxiety levels and potential cost. Thirty one percent of dentally anxious respondents were definitely interested in sedation for treatment, and a further 54% were interested depending on cost. Only fifteen percent of anxious patients had no interest in pharmacological help for dental treatment. In contrast, 45% of respondents with low dental anxiety were not interested in having treatment with sedation, although it is

worth noting that 43% would be interested depending on cost and 12% were definitely interested in sedation for treatment. Within the UK, expressed interest in sedation provision is high in both lay and referrer populations, however there is a difference between demand and need. An audit of secondary care referrals from primary dental practitioners to a UK dental hospital (McGoldrick *et al.* 2001) showed a request for sedation in 98% of referrals, but provision of sedation or DGA in only seventy percent (64% and 6% respectively). Approximately thirty percent of patients were managed without pharmacological interventions. A similar disparity between predominant requests for pharmacological anxiety management and a lower eventual provision has also been reported elsewhere (Wallace 2006; Woolley 2009) demonstrating that demand is greater than need, and highlighting the value of objective tools to inform clinical decisions (Coulthard *et al.* 2011; Goodwin *et al.* 2012; Goodwin and Pretty 2011; Pretty *et al.* 2011). Despite the benefit of such tools, differentiating between need and demand is difficult to undertake objectively. As reported earlier, in one study (Pretty *et al.* 2011) 36 (5.9%) of patients assessed with IOSN reported a very high dental anxiety yet were judged not to need sedation, and in a separate study by the same research group 14% of referred patients (n=19) deemed not to require sedation had MDAS scores >18 (Goodwin *et al.* 2012). In contrast 63% of patients (n=88) deemed not to require sedation had requested referral for it, and seventeen percent of patients deemed not to require sedation for treatment who also reported that they could have tolerated treatment without sedation still reported that for the same type of treatment they would request sedation (Goodwin *et al.* 2012). Such studies highlight the complex relationship between assessed 'need' and requested demand for sedation.

2.3.5 The Purpose of Conscious Sedation for Anxious Patients

The provision of adequate anxiety management to enable treatment is both a responsibility for the dental profession and a right of patients (GDC 2001). ACD (DoH 2000) deemed treatment for dental caries under DGA as having an unacceptable risk:benefit, with only seven years out of the thirty five between 1964 and 1999 not containing deaths related to dentistry under DGA. Sedation provides an alternative means of providing dental treatment whilst maintaining consciousness, and therefore a reduced risk of morbidity or mortality. However in addition to facilitating access to dental care, a secondary agenda of weaning patients off sedation is also reported in the dental literature (Ellis 1996; Ryder and Wright 1988). Sedation therefore embodies different meanings for its users, with both short-term and long-term definitions. In the short-term, sedation allows patients to undergo treatment they would otherwise find intolerable whilst in the long-term sedation may be seen by some as an intermediate step on a trajectory from avoidance to accepting treatment using local anaesthetic alone (RCA 1999). Referring to the double agenda of sedation, Milgrom and Weinstein (1993) assert that their own approach to treatment, whilst containing both agenda, prevents the imposition of their views onto patients and instead encourages patient autonomy in deciding whether to stop using sedation.

2.3.6 The Benefits and Disadvantages of Conscious Sedation

Nitrous oxide inhalation sedation has two effects of benefit to dentistry- the reduction of pain perception and the increase in relaxation (Devine *et al.* 1974; Jacobs *et al.* 2003). In a controlled study, (n=54) participants were allocated to receive either nitrous oxide and oxygen, oxygen alone, or no intervention, and subjected to electrical shocks which increased in strength. Participants receiving nitrous oxide felt more relaxed, could tolerate greater shocks, and rated their final

shock as similar to the control and placebo groups despite its significantly greater magnitude (Devine *et al.* 1974).

Midazolam also has an analgesic effect (Nakanishi *et al.* 1997), though this is less reliable. In a controlled study, (n=37) participants were assigned to received either saline or midazolam of varying strength (0.25, 0.5 or 0.75mg/kg). Participants who received 0.5mg/kg or greater had a reduced tactile and pain perception which was not present in participants with a lower dose, despite its sedative effect. However, in a 70kg adult this would be equivalent to doses greater than 3.5mg, which may be more than patients require for anxiolysis. One of the effects of benzodiazepines is production of an anterograde amnesia (Curran 1986). Midazolam provides dense, short-lasting memory impairment independent of sedation level (Merritt *et al.* 2005; Thompson *et al.* 1999). In a study comparing midazolam (3mg), nitrous oxide (25%) and a control in a pseudo-randomised cross-over study, (n=22) participants attending for restorative treatment demonstrated significantly greater memory impairment with midazolam than the other modalities (Thompson *et al.* 1999). The amnesic effect of midazolam makes it particularly useful in situations where recall may have an adverse effect, such as traumatic surgical procedures (Nadin and Coulthard 1997) or needlephobia (Dixon *et al.* 1986), and therefore significantly affects patients' acceptance of treatment (Ellis 1996).

Despite its benefits, sedation also has several drawbacks relating to resources, equipment, drug effects, and technique which make its provision more challenging than treatment without sedation (Malamed 2010; Meechan *et al.* 1998). The gradual process of titrated sedation provision and subsequent recovery makes treatment appointments longer than without sedation, thus incurring a time (and therefore financial) cost. In an early comparison of midazolam and diazepam intravenous sedation for restorative treatment, the mean time to conduct the dental treatment

was 35.5 minutes, whilst sedation and recovery added a further 38.9 minutes to the procedure in patients receiving midazolam (Barker *et al.* 1986). Even at discharge patients who have had midazolam are not fully recovered so that, in addition to costing clinicians' and patients' time, intravenous sedation requires the presence of a chaperone which adds another cost. Apart from the close association with time per appointment, both inhalation and intravenous sedation provision require additional drugs and equipment to safely provide sedation which incur extra costs (SDAC 2003)²⁰.

In addition to their cost, the equipment required for sedation has disadvantages. Portable nitrous oxide equipment is bulky, and the nasal hood may not be acceptable to the patient and can make treatment of anterior teeth more difficult (Girdler *et al.* 2009). Intravenous sedation requires the use of needle-mounted cannulae to gain venous access, which are painful and contribute to anxiety regarding future treatment (Speirs *et al.* 2001). The drugs also have side effects and potential risks associated with them. Nitrous oxide has a lower potency than benzodiazepines, and is more technique sensitive. It can induce nausea and vomiting if given in a high concentration (Berge 1999; Hallonsten *et al.* 1983); relies much more on an augmenting iatrosedative approach (Friedman 1983; Girdler *et al.* 2009); and can be affected by patients' compliance with nose-breathing (Girdler *et al.* 2009). Midazolam reduces the protective upper airway reflex (Murphy *et al.* 1994), whilst the respiratory depression it creates may make it less suitable for bariatric patients (Reilly *et al.* 2009). Its amnesic effect does not affect immediate recall and engagement with information (Merritt *et al.* 2005), potentially leading to disbelief of clinicians' post-treatment advice, and whilst midazolam-induced amnesia usefully prevents the acquisition of unpleasant information, it also prevents the

²⁰ For example, a hand-held pulse-oximeter costs over £200 and nitrous-oxide sedation equipment costs over £2000.

acquisition of other information (Greenblatt 1992) which may prevent the acclimatisation of anxious patients through desensitisation (Longman *et al.* 2000). The lack of recall by patients may also lead them to conclude that they were unconscious for treatment, which could potentially have an impact on subsequent appointments where they are conscious.

2.3.7 The Location of Conscious Sedation Provision

The ideal location of sedation practice is a complex decision. A survey of primary care dental practitioners operating under the previous general dental services (GDS) contract (DoH 2005) found that 61% thought that the GDS should provide sedation (Foley 2002). However studies examining the actual provision of sedation within primary care have shown wide variations in availability. Whilst approximately half of primary care dental practitioners have had some form of postgraduate training in sedation (Edmunds and Rosen 1989; Hill *et al.* 2008), provision ranges from 12-51% of practitioners (Burke *et al.* 2005; Chadwick *et al.* 2006; Edmunds and Rosen 1989; Foley 2002; Hill *et al.* 2008; Whiston *et al.* 1998). Barriers to primary care provision of sedation are related to its disadvantages, and include lack of confidence, and financial and time constraints (Coulthard 2008; Ferry and Debuse 2008; Hill *et al.* 2008).

Secondary care are

'[s]pecialised medical services and commonplace hospital care, including outpatient and in-patient services [accessed] often via referral from primary care services' (DoH 2009, p. 295).

It is more expensive than primary care (Jameson *et al.* 2007; Pau *et al.* 2010), however it has been an important part of conscious sedation provision in the United Kingdom, both in terms of treatment and education. In surveys, 19% of Scottish

consultant anaesthetists (Shearer *et al.* 2004) and 39% of Scottish General Dental Practitioners (Foley 2002) suggested that sedation was not appropriate in primary care centres. Surveys of hospital-based dental specialists also show high support for conscious sedation within hospital settings (Morgan and Skelly 2005; Wilson *et al.* 2006). Despite the recognition of the need for secondary care sedation provision however, only one third of consultants in Restorative Dentistry who responded provided conscious sedation themselves (Morgan and Skelly 2005).

Referral to secondary care is a professional responsibility for primary care dentists when treatment is beyond their experience, ability or facilities (GDC 2005; Morgan and Skelly 2005). The limited provision of sedation services in the GDS means that a significant number of patients are referred to secondary care facilities for treatment, and the majority of referrals to secondary care settings come from primary care dentists (McGoldrick *et al.* 2001; Woolley 2009). In 2006, University Dental Hospital Cardiff provided 291 assessment appointments for new adult patients referred for restorative conscious sedation (Woolley 2009), and in an audit of referrals to Newcastle Dental Hospital, 226 were received in the 3-month sampling window (Dentith *et al.* 2010). The relationship between primary and secondary care is reciprocal. Referrals to secondary centres provide resources (patients) for education or research, and in order to remain efficient and maintain capacity for future treatment, secondary care centres need to be able to return patients back to the primary care service. Referrals accepted for secondary care sedation should include a mix of difficulties to take into account the mixed roles of secondary institutions so they can provide both service and training (Woolley 2009). This training and education role in secondary care may be important in the consequent provision of sedation in primary care (Whiston *et al.* 1998).

Referral is a complex process involving a range of different factors (Chadwick *et al.* 2006; Morris and Burke 2001), and successful referral to secondary care has several barriers including fear of treatment or referral, low expectation of outcome, recognition of need, and communication barriers between patients, referrers and secondary care centres (Gardner and Chapple 1999; Griffiths *et al.* 1998). Although Gardner and Chapple (1999) initially identified these barriers in a study of angina referrals, these are also pertinent to dentally anxious patients. Patients referred for sedation are different from patients referred for other dental treatment. Reflecting anxiety prevalence studies, patients referred for sedation are more likely to be female, less likely to have a degree or higher degree, and fifty percent will attend the dentist only in a dental emergency (Boyle *et al.* 2009; McGoldrick *et al.* 2001; Wallace 2006; Wilson *et al.* 2002). Prior experience of sedation is higher in referred sedation patients than referred restorative patients, and sedation patients have higher levels of fear (Boyle *et al.* 2009). Referral to secondary care has a high failure-to-attend rate (Boyle *et al.* 2010; Griffiths *et al.* 1998).

2.3.8 The Impact of Conscious Sedation

Conscious sedation techniques are extremely effective in facilitating access to dental care. A success rate of 83.6% was found for nitrous oxide inhalation sedation used to facilitate paediatric sedation (Blain and Hill 1998) and a success rate of 95.9% in adult exodontia patients. Although care must be taken transferring these results to adult restorative patients, due to the difference in age and treatment type, a similar pattern has been demonstrated by Wallace (2006) in a randomised audit of (n=125) adult patients seen in a secondary care sedation clinic over a four year period. The rates of complete success in facilitating treatment for nitrous oxide and midazolam sedation were 84% and 95% respectively, and in addition some patients had differing success on different appointments (7% and 3% respectively).

Although sedation is highly effective in allowing short-term access to dental services, exposure-orientated behavioural management is the 'gold standard' for treating dental anxiety, providing greater, longer lasting reductions in dental anxiety than pharmacological techniques (Aartman *et al.* 2000; Hakeberg *et al.* 1990; Milgrom 2007; Thom *et al.* 2000). Pharmacological treatment however is not separate from psychological treatment, as dentists' interaction affect patients' expectations and experience, and patient preparation and management will therefore affect pharmacological effectiveness (Milgrom 2007; Milgrom and Weinstein 1993). Aartman *et al.* (2000) found that anxiety reduction following treatment at a Netherlands specialist clinic was stable a year after treatment, but greater with behavioural management and inhalation sedation than intravenous sedation. Thom *et al.*'s. (2000) study of a German sample found that both benzodiazepines and psychological treatment reduce anxiety initially, but whilst anxiety continued to reduce in patients treated psychologically, those treated with benzodiazepines returned to control levels. Similarly in a 10-year follow-up of fear reduction treatment in a Swedish clinic by Hakeberg *et al.* (1990), reduction in anxiety was greater for desensitisation than benzodiazepine treatment (although this difference reduced over time possibly due to regression-to-the-mean or normalised relaxation ability). In a Norwegian comparison of nitrous oxide sedation, cognitive behavioural therapy and relaxation, all three modalities produced a comparable short-term reduction in dental anxiety (Willumsen *et al.* 2001). Those reductions in anxiety that do occur following sedation treatment vary with modality, and though intravenous midazolam gives a more reliable treatment window, inhalation sedation is more likely to reduce dental anxiety after treatment (Goodall *et al.* 1994). Care must be taken in applying conclusions from European or pre-2000 studies as treatment protocols may differ from current UK settings, yet even including such studies the evidence for the efficacy of conscious sedation treatment

in producing a long-term effect on dental anxiety levels is poor. In a systematic review of 335 published papers examining the effectiveness of conscious sedation compared with a placebo or control for treating dental anxiety, only one paper met inclusion criteria and gave no evidence for a reduction in dental anxiety (Adair *et al.* 2003). Despite this lack of quality evidence, experience-based clinical opinion suggests that sedation does have *some* effect in rehabilitating patients to treatment. Wallace's audit (2006) found that 45% (n=36) of sedation-treated patients subsequently remained sedation patients (28% IVS, 16% IHS and 1% oral respectively) whilst 14% were consequently able to have some or all of their restorative treatment without sedation (11% acclimatised to LA for all treatment and 3% for some)²¹.

Whilst sedation meets immediate oral-health needs, short-term dental gain should not be the sole purpose of treatment as such an approach may lead to a repeated cycle of sedation (Milgrom 2007). In their discussion of treatment options for anxious patients, Milgrom and Weinstein (1993) claim that whilst patients *can* wean themselves off nitrous oxide, few IVS patients overcome their fear and become regular attendees. For some patients, their experience of sedation leads to a preference of sedation for future treatment (Lindsay *et al.* 1987)²², and if sedation is provided using midazolam the anterograde amnesia it induces may perpetuate patients' perceived need for sedation (McGoldrick *et al.* 2001). There is also a risk of the treatment trajectory stagnating from a dental perspective, with repetitive referrals for the same treatment modality (McGoldrick *et al.* 2001). These impacts raise questions about patients' and clinicians' expectations of the short-term or long-term nature of treatment in secondary care settings, and demonstrate the

²¹ The remaining 41% were either referred elsewhere or placed in a miscellaneous outcome group.

²² This is not a consistent pathway. Whilst Lindsay (1987) found that sedation experience led to a preference for sedation, 39% of patients who had experienced sedation did not want to have it again.

importance of the clinician-patient relationship in treating patients with dental anxiety (Humphris 2001).

The ability to transfer the treatment alliance and good communication are important in patients' moving from secondary care to primary care (Dailey *et al.* 2001). Patients have an initial anxiety over the change from a secondary care anxiety 'specialist' to a primary care dentist (Hakeberg *et al.* 1990), and this is greater if treatment is provided via DGA or benzodiazepines (Berggren 1986; Hakeberg *et al.* 1993a). Also important in patients' transference of experience is their perceptions of applicability. Examining the efficacy of treatment for anxiety on its consequent reduction, Kent (1986) found that for exposure to dentistry to be effective in changing patients' perceptions, it must be contra-expectational *and* seen as typical. An experience of treatment must not only counteract feared outcomes, but the environment and manner that it is provided in must not be perceived as special or exceptional. If 'surprising' treatment is provided in atypical settings, the difference between anticipation and experience is discounted as due to the exceptional status rather than the possibility of a different treatment experience. This has implications for the transferability of dental experiences in secondary care sedation settings to everyday primary care dental practice.

2.3.9 Conscious Sedation Education

In addition to providing secondary care sedation treatment, University dental hospitals also provide training and education in sedation for undergraduate and postgraduate students. Undergraduate education in sedation was outlined in The First Five Years (GDC 1997a). This stated that undergraduates should '*have knowledge of* (p. 28) (i.e. a sound theoretical knowledge but only limited clinical or practical experience in) inhalational and intravenous sedation techniques, sedation

techniques in clinical practice, and the role of sedation in dentistry. Whilst practical postgraduate training would be mandatory for those wishing to use sedation, undergraduate exposure should give an introduction which equipped them to recognise and assess anxious patients and select appropriate cases for sedation and referral through experience of the process of sedation provision. Three years after its initial publication, the Dental Sedation Teachers Group (DSTG) published a curriculum which would

'provide an introduction to the attitude, knowledge and skills required for the practice of conscious sedation in dentistry as defined in the core curriculum' and "enable the undergraduate to acquire a sound foundation in these skills through clinical practice' (DSTG 1999).

In 2000 a survey highlighted significant deficiencies in undergraduate sedation teaching (Leitch and Girdler 2000). No school provided the theoretical and practical training recommended by the Poswillo report (1990), and only two had dedicated sedation departments. A summary of open comments showed that clinical teachers thought sedation teaching was insufficiently resourced with a lack of time, student experience, teachers and funding. Sedation was perceived as a postgraduate subject, and not integrated into all aspects of treatment as an adjunct to pain and anxiety management. In a follow-up survey six years later, although there had been a general increase in clinical experience of inhalation sedation, experience between dental schools was still inconsistent (Leitch and Jauhar 2006). There was still no school which provided the theoretical and practical training recommended by the Poswillo report, GDC, or DSTG (DSTG 2005; GDC 2002; Poswillo 1990), and the authors concluded that whilst standards in training had improved, there was still room to develop.

At the time of ACD's publication (DoH 2000), postgraduate training in sedation was provided by *'at least 449 courses either wholly or partly on conscious sedation'* (p.

34). The document recommended that undergraduate training should provide experience and develop the ability to assess the suitability of methods, but that graduates should have evidence of postgraduate training and practice before providing unsupervised sedation. Since its publication, Continuing Professional Development has become more formalised (GDC 2010). In order to provide evidence of competency and experience in conscious sedation, the DSTG developed a standard document for postgraduate training (DSTG 2008) to provide some form of homogenous curriculum and assessment. As part of the development of postgraduate training, University accredited courses have been developed (Little *et al.* 2004), providing education at certificate, diploma and master's levels at a variety of academic institutions (Hill *et al.* 2008).

2.3.10 Experiences of Sedation

The evidence base for reported experience of sedation is scarce. One study which *did* look at patient's reported experiences was that conducted by Averley *et al.* (2008) into those of children and parents attending a referral practice for paediatric conscious sedation. Whilst the study was based upon focus groups of treated children and their parents, and therefore not directly comparable with individual interviews regarding adult sedation, this qualitative study identified several phenomena of interest to the present study. There was confusion amongst some (though not all) participants regarding their anticipated conscious state as '*when you get put to sleep?*' (p. 7); parental escorts were aware of their impact upon sedated participants and the authors concluded that anxious escorts who stay in the surgery '*require careful management*' (p.10); the long-term impact was not an increased attendance at primary care facilities without sedation, as only 1 participant (4%) expressed willingness to subsequently attend without sedation. Instead, an ironic reduction in anxiety about the process of anxiolysis was the only change in most

participants. Most parents felt sedation would still be required in the future but that anxiety about treatment would be lower.

2.4 Summary

This section examined the biomedical literature regarding the provision of conscious sedation for dental anxiety. Dental anxiety affects a significant proportion of the UK population, with impacts for both affected individuals and treating clinicians. Anxious individuals find themselves caught within a vicious cycle of avoidance, negative health and social impacts, traumatic treatment and subsequent reinforcement. Their wish to address the problem is ambivalent due to their equal wish to avoid interaction with dentistry. The management of anxiety involves good relationships with treating clinicians, as anxiety is perceived as a socially rather than psychologically located phenomenon. One method of overcoming anxiety is through the provision of sedation, for which there is both a need and a demand. Secondary Care Sedation Clinics meet this need whilst simultaneously addressing the educational requirements of the General Dental Council. Whilst sedation is a pharmacological intervention, the importance of the dentist:patient relationship to anxious patients' perceptions may have an impact of the outcomes of sedation treatment. The social nature of sedation treatment implies that social science theoretical literature may help inform exploration of sedation practise.

2.5 The Social Science of Frontiers

2.5.1 Introduction

'Dental problems...have their origins in social relationships and people's social context' (Nettleton 1992, p. 103). Given the social nature of dentistry, this section examines the social scientific context within which to locate my research. This thesis examines the social 'situation' (Blumer 1969; Clarke 2005) of SCSCs. The interaction between clinicians and anxious patients within these environments involves the meeting of different social groups - 'lay' patients and 'dental professionals', the identification of which implicitly involves defining borders. Rather than focussing upon social scientific analyses of biomedical work, and dental work in particular, this chapter therefore explores the practices and processes related to worlds, frontiers, boundaries and transitions. Frontier management is explored by looking at frontier-defining, frontier-spanning, identity management, and social transitioning. Such concepts may be useful in examining the different frontiers involved within SCSCs, and the methods of managing them. The recognition that SCSCs are frontier sites allows the social processes they contain to be examined in the light of social science literature rather than the dearth of dental literature on the social process of sedation provision. The application of these conceptual tools may consequently shed light on secondary care sedation provision.

2.5.2 Social Worlds

One sociological term which has found its way into common parlance is the concept of social 'worlds', such the 'art world' (Mail Online 2007; Willey 2009) or the 'world of finance' (Molloy 2011). Members of modern societies are engaged in multiple overlapping versions of these 'social worlds' (Shibutani 1955; Strauss 1993), which are collectives with shared commitments, activities, resources, goals and ideologies

(Clarke 1991; Strauss 1978a). They are formed by the association and interaction of individuals with similar foci, and defined by social rather than geographic boundaries (Shibutani 1955; Strauss 1978a)²³.

As social worlds such as those of secondary care sedation professionals (SCDPs) develop around a commitment to a particular action, their focus changes from the action being “done”, to it becoming “imperative” (Strauss 1982), and contrasts against the concerns of alternative worlds which are perceived as less worthy. As worlds become more substantial, they start to differentiate themselves from others, such as the difference between dentistry and medicine, and compete for resources in order to bolster their legitimacy (Strauss 1984). The overlapping resource needs or areas of concern different worlds have ensure that rather than remaining isolated, they debate, negotiate, compete and coerce with others within ‘arenas’ (Strauss 1993)²⁴, where individual members are committed to act and create discourse about relevant concerns (Clarke 2009). Where agreements are reached between social worlds within such arenas, they may be delicately held, depending on the ability of each world to see the issue in a compatible way. Actions agreed between worlds must fit with each for long-term satisfying engagement. If not *‘an exchange will not occur, be quickly tried and rejected, or finally break down or be only partly accepted’* (Strauss 1993, p. 234). In their examination of primary medical care, Tovey and Adams (2001) proposed that different worlds overlap (intersect) at different strengths. When intersection is strong, worlds collaborate to form a new line of work. When intersection is weak, the partial acceptance of agreed actions leads to appropriation of one world’s tools for another’s own purposes, whilst distance from the appropriated world is maintained. One social world can therefore use the technology of another without ‘buying in’ to the originators’ underlying ideology.

²³ Early definitions of social worlds defined them by the limits of their internal communication.

²⁴ This may be considered analogous to a social ‘evolution’ of species, gradually differentiating yet competing whilst still similarly enough focussed.

Tovey and Adams' (2001) also questioned the need for social worlds to be defined by the limits of their internal communication, proposing the concept of 'latent sub-worlds' for '*externally created and labelled groups*' (p. 699) such as patients with medically defined diagnoses (or conditions such as dental anxiety). Although individual patients do not interact with each other, as members of society they form a 'lay' social world in contrast to biomedical specialities such as medical general practitioners, pain medicine consultants (Baszanger 1998a, b) or PCDPs and SCDPs.

The interaction between different social worlds can take a variety of forms (Figure 2.2). Where social worlds seek to defend themselves against other worlds, they may undertake boundary work (Gieryn 1983) to define themselves as different and legitimate (Strauss 1982). Conversely, in order to co-operate social worlds may employ standardised packages (Fujimura 1988, 1992) and their component boundary objects (Star and Greisemer 1989) to form connections between them. Such mediating 'objects' may need to encompass rather than reach between co-operating worlds, and so mediating boundary organisations (Guston 1999, 2001) may be used to stabilise the boundary between worlds by internalising it within a third party which works with representatives of each world. Where members of different worlds socially interact, they may be required to manage others' perceptions of them by performing roles (Goffman 1959 [1990]; Hochschild 1979, 1983; Strauss *et al.* 1985 [1997]), and where individuals pass between social worlds they may pass through an intermediate state (Turner 1967, 1969 [1995], 1974, 1977, 1979, 1982) between divesting themselves of membership of one world and accruing membership status of the other, much as passing between rooms of a house requires spending time in the connecting passageway (van Gennep 1908 [1960]).

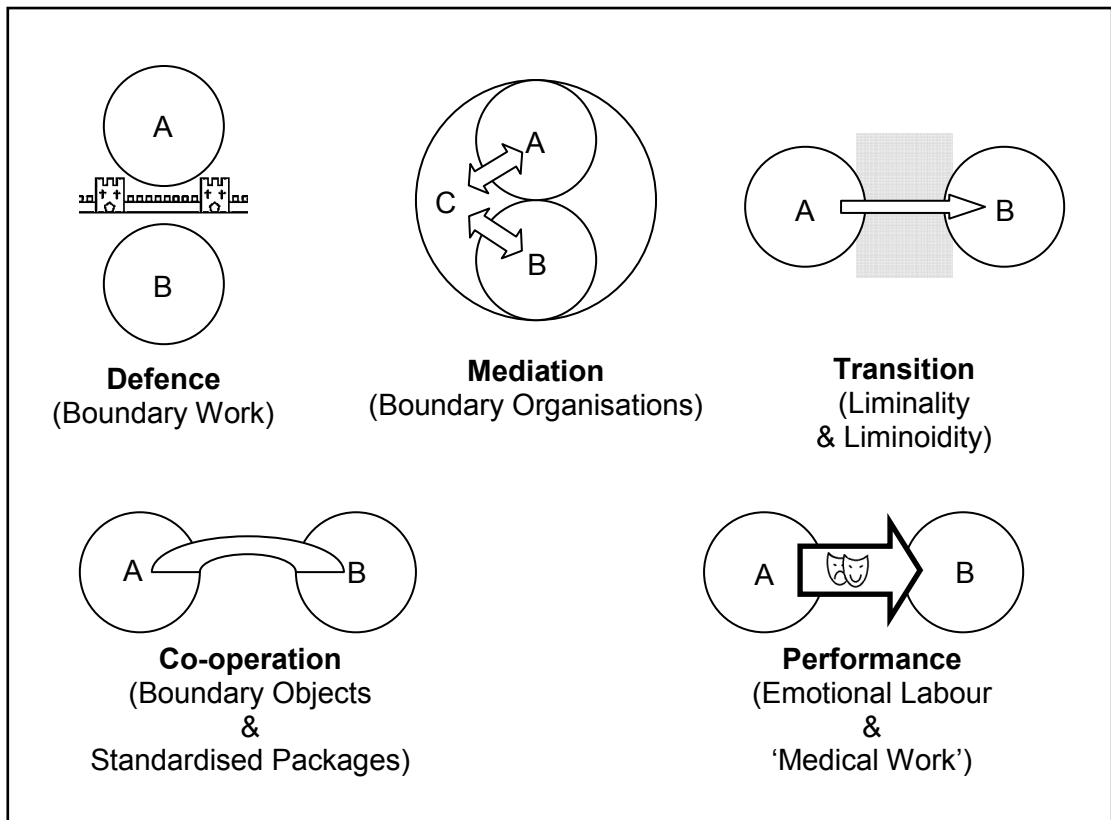


Figure 2.2 Boundary processes and structures of interacting social worlds

2.5.3 Frontier-definition

Nascent social worlds legitimise their existence through a variety of activities. They define the limits of their commitments in order to bring others into their world; differentiate themselves from other worlds; (re)write their world’s history, highlighting key figures that support their stance²⁵; negotiate in arenas of discourse and compete for resources with other worlds (Gerson 1983). By defining themselves as different from competing social worlds, members undertake ‘boundary work’ (Gieryn 1983). Boundary work is the creation of a social boundary which differentiates worlds through the adscription of certain attributes. Gieryn discusses this concept as a way of addressing *‘the problem of demarcation’* (p.781) between science and non-

²⁵ For example Horace Wells, a dentist, has been credited as the “father of anaesthesia” by sedationists whilst John Snow and William Morton (a physician and medical student respectively) have been given the epithet by anaesthetists.

science (i.e. religion and mechanics). Such work is flexible, so that lauded characteristics can vary depending on the boundary being drawn. For example, Gieryn demonstrates how John Tyndall emphasised science's empiricism in contrast to religion's metaphysical claims but its theoretical importance in comparison to engineering's practical knowledge. Boundary work achieves its ability to differentiate by identifying foils to contrast with, and is undertaken when social worlds seek to expand, monopolise resources or defend autonomy. It portrays others in a way which benefits the idealist in order to expand their influence; excludes resources from alternative worlds by portraying them as inferior; and protects worlds' autonomy by transferring responsibility from members and locating it in others (e.g. sweet manufacturers are not responsible for decay, consumers are for eating too much).

Boundary work is undertaken by professionals seeking to differentiate themselves from other groups, and is therefore not confined to science but is present within *all* professions, including healthcare. Dingwall (1977) showed how health visitors demonstrate their relative competence to doctors and social workers in their 'atrocious stories', and argued that such accounts should be expected where one world feels that another's attempt to control their domain is unjustified. Likewise Allen (2001) demonstrates how nurses contrast themselves from doctors, by calling into question their perspectives and competence. Timmermans and Tanner (2004) highlight the disputed occupational boundary between Operating Department Practitioners and theatre nurses working within the same area, and how the legitimate use of a technology (e.g. diathermy) was a symbolic marker of difference, acting as a boundary object with imputed meanings for different groups. Although groups seek to highlight difference, Allen (2001) and Timmermans and Tanner (2004) also demonstrate how such work is intermittent, with '*work group solidarities that cut across conventional lines of demarcation*' (Allen 2001, p. 97). Such studies highlight

the potential strategies that clinicians who use sedation might employ in conducting and discussing their work.

2.5.4 Frontier-spanning

Whilst the defence of boundaries is sometimes required, the cooperation between worlds is also of sociological interest. In order for different social worlds to cooperate, they develop boundary-spanning entities to facilitate their interaction. Such entities can pass across separate worlds' frontiers or can internalise them (Fujimura 1988, 1992; Guston 1999, 2001; Moore 1996; Star and Greisemer 1989).

The analysis of objects used to facilitate interaction was initially outlined by Star and Greisemer (Star 1989b; Star and Greisemer 1989). They posited the concept of 'boundary objects' which

'inhabit several communities of practice and satisfy the informational requirements of each of them. [They] are thus both plastic enough to adapt to local needs and constraints of the several parties employing them, yet robust enough to maintain a common identity across sites. They are weakly structured in common use and become strongly structured in individual site use. These objects may be abstract or concrete' (Star and Greisemer 1989, p. 393).

Such objects allow information to pass between worlds, so that they can productively interact despite their varying foci (Baszanger 1998a; Sismondo 2004). They are methods of translating one world's organisational system (infrastructure, conventions, categories, information requirements, and standards) (Trompette and Vinck 2009), and as such temporarily act as '*anchors and bridges*' (Star and Greisemer 1989, p. 414) between worlds which jointly use them despite each world's interpretation potentially differing considerably (Prior 2007). Boundary objects can be physical objects, such as care pathways (Allen 2009) and radiographs (Gorman 2002), or abstractions such as medical disciplines (e.g. pain

medicine (Baszanger 1998b). The textual and overt information-conveying nature of boundary objects' original proposition has led to a concentration upon these forms (Fox 2011; Oswick and Robertson 2009). However, in addition to written or visual information transfer, the embodied information contained within interpretations of technology has led to its perception as a boundary object as well (Fox 2011; Garrety and Badham 1999). Technologies such as asthma inhalers, diathermy units and carbolic acid or sedation are interpreted by their different users, thereby conveying information to them, and so have the potential to link worlds.

Since its inception, the boundary object concept has developed. The ambivalent nature of boundary objects has been recognised, and as well as having a facilitative role they can be obstructions to interaction (Carlile 2002; Fox 2011; Oswick and Robertson 2009). Whilst their flexibility can encourage a diversity of simultaneous users, it also permits refusal of consensus and the construction of alternative uses (Fujimura 1992). Fox's (2011) discussion of Lister's attempt to introduce carbolic antiseptics highlights the potential for differing interpretations to impede interaction. Although Lister introduced carbolic spray as a method of preventing infection, surgeons of the day interpreted its disinfecting effect as locating the source of infection in them. Consequently, carbolic acid's interpretation prevented co-operation and was rejected by the surgeons in favour of aseptic technique which constructed them as guardians against infection. The multiple interpretations that technologies such as carbolic spray or sedation can have depending on the situation implies that rather than a Cartesian typological duality of facilitative / inhibitory, they might instead be seen as situationally defined. Where differing interpretations can co-exist they facilitate interaction, but where they clash "*hiccups*' occur... [so] they must be redefined or reconstructed' (Garrety and Badham 1999, p. 281) or else they will be rejected (Fox 2011).

Fujimura's (1992) examination of oncogene research elaborated boundary object theory by recognising that boundary objects with an established mode of use and stable role between worlds are *'less abstract, less ill-structured, less ambiguous, and less amorphous'* (p.169). Standardised packages are theory-methods combinations which have a plastically interpretable 'theory' attached to a recognised standardised practice / technology, for example 'oncogene research' or sedation. In her discussion of oncogene theory, Fujimura notes how participants interpret cancer cells differently (i.e. as cancer, lab resources, testing grounds or clinical waste) but achieve useful research outputs. Standardised packages therefore allow different worlds to engage with the central object in a routine way despite their differing perceptions *'to get work done and to produce relatively (and temporarily) stable "facts"'* (p.168). The use of standardised packages to produce information reflects its initial recognition in scientific practice. Following Fox's (2011) application of boundary objects to medical practice rather than information transfer, the outcome of standardised package use in healthcare settings such as SCSCs also allows different worlds to meaningfully interact, but with stabilised rather than innovative technologies which convey *embedded* information and have dependable outcomes.

Examination of boundary objects and standardised packages aids the analysis of social situations such as biomedical clinics due to participants' *'distinctive relations with and discourses about [them]'* (Clarke 2005, p. 51). Examining different participants' engagements with sedation may therefore be useful to understand SCSCs.

Baszanger's (1998a, b) use of the expanded idea of 'boundary concepts' (Löwy 1992), in her analysis of the development of 'pain medicine' as a distinct medical speciality, enlarged the location of boundary objects. It moved such boundary spanners from within the meeting point of several different social worlds to

encompassing one social group (i.e. pain medicine doctors or sedationists) comprised of smaller groups with differing views of the purpose of their practice. Moore's (1996) study of the creation of scientific public interest organisations similarly expanded the boundary-spanning functions of boundary objects and standardised packages, translating their form and function to organisations which '*provide both an object of social action* [- the relationship between the different parties,] *and stable but flexible sets of rules for how to go about engaging with the object*' (p. 1598). Instead of being located *between* interacting social worlds, boundary organisations *contain* representatives of social worlds, using boundary objects, standardised packages and specialists to mediate between them (Guston 1999, 2001). These intermediary specialists are similar to Wilensky's '*contact men*' [*sic*] (1967, p. 10) who are important where interacting worlds, such as those of dentistry and anxious patients, depend on others to achieve goals or are potentially in conflict with them. Such individuals facilitate the engagement due to a professional service, career or ideological motivation. Each party is unable to achieve their goal without the facilitation of these intermediaries, who liaise between worlds, mediating relationships and using techniques of persuasion to change others' perceptions and conduct (Hirsch 1972).

Boundary organisations are ostensibly translating and mediating collectives, which involve the collaboration of parties from both sides of a boundary. They are accessible and anchored to these different worlds, but can be engaged without each individual world losing their identity (Forsyth 2005; Guston 1999). They provide a bridge between each world by internalising boundary work, and anchoring to each interested party to prevent partisanship. As such, boundary organisations theoretically have a Janusian stance of balancing paradoxical demands and allegiances from different parties, and Guston (1999, 2001) emphasised the importance of boundary organisations' dual accountability. Whilst the intermediary

role they play spanning the gap between worlds implies that their preferred role should ideally be that of the '*honest broker*' (Lorenzonia *et al.* 2007, p. 73), Huitema and Turnhout (2009) demonstrate that in practice boundary organisations have conflicting pressures and pulls towards advocacy of one side due to their orientation. This pull might be expected when the 'broker' and one of the worlds have shared professional ideologies such as record companies and talent scouts, or PCDPs and SCDPs.

Boundary organisations are important due to their ability to facilitate work which individual member worlds could not perform themselves (Guston 1999; Lorenzonia *et al.* 2007). In order to achieve this they convene parties together in face-to-face situations to promote the building of a trusting relationship; translate resources and information so they are comprehensible by each party; facilitate co-operation and transparent relationships through clear communication; and ensure that the interests of all involved parties are evenly represented (Cash *et al.* 2003; Tribbia and Moser 2008). In order to be successful, boundary organisations must overcome limitations to their perceived acceptability and compatibility with engaging worlds such as SCSCs' acceptability to anxious patients (Lorenzonia *et al.* 2007). In addition to containing internal work they give '*[p]ublic displays ...[which] provide templates for action by others*' (Moore 1996, p. 1599). Such organisations therefore have an implicit, if not explicit, educational role.

Whilst boundary organisations enable the cooperation of different social worlds, they also have inherent risks due to their dependence upon delegated action. Principals (who by definition have limited knowledge of the task they are delegating) risk picking inferior or unreliable agents to carry out the task. Such risks occur when commissioning worlds such as legislators or patients have to rely upon another

world to enact their wishes. In addition, delegation and self-governance encourages the shirking of responsibility (Guston 1999).

Boundary organisation literature has focussed upon the interface between science and policy social worlds (see for example Cash *et al.* 2003; Forsyth 2005; Guston 1999; Huitema and Turnhout 2009; Lorenzonia *et al.* 2007; Moore 1996; Tribbia and Moser 2008; van Rijswoud 2010). However, as an analytical tool it should apply equally well to other situations which contain and mediate different parties. Like the related concepts of boundary objects and standardised packages, their application should be translatable from the science arena to sites of healthcare provision such as SCSCs.

2.5.5 Frontier display

An integral part of the defence or reduction of frontiers between worlds is their perception by others, so interaction at frontiers requires social worlds to be concerned with how they are assessed (Gieryn 1983). Engaging with abstract social worlds involves engaging with their concrete representative individuals. Everyday social interaction requires *'the individual in ordinary work situations [to present] himself [sic] and his activity to others'* (Goffman 1959 [1990], p. 9), and likewise interaction between representatives of social worlds are also performances for the benefit of conveying an impression of one's actions, character, intentions etc.

The idea of self-presentation develops Mead's (1934) analysis of individuals' identities comprising of three parts: a 'me', an 'I' and a 'self'. An individual's 'me' is informed by the reflection back to them of how they are perceived by others in society, and their own perceptions of their interactions with their environment. This 'me' is self-perceived and actively managed by the 'I', to create a sense of 'self'.

Using a dramaturgical metaphor, (Goffman 1959 [1990]) developed these concepts as a perceived 'front-stage' self or 'character', and a hidden 'back-stage' self or 'performer' working to manage the presentation of self in everyday life. The performance of characters in everyday life is an established concept (Shakespeare 1623 [2005]), but Goffman's (1959 [1990]) analysis developed the characters which one plays from stages of life²⁶ to roles in each specific interaction. Each 'theatrical' encounter requires a '*front*' (p. 32), comprising of a setting for the scene being acted out, and an '*appearance and manner*' (p. 34) commensurate with the role being played. The appearance and manner that performers display give '*idealised*' (p. 44) images conforming to abstract stereotypes that audiences expect, which thereby aid the belief in their part.

The performative nature of biomedical work such as sedation provision is well recognised (see for example Atkinson 1995; 1997; Emerson 1970; Sinclair 1997; Strong 1979; Strong and Dingwall 2001). Such analyses extend Goffman's presentation from the individual to the wider situation. Atkinson (1997) discusses how medical treatment involves '*reality management*' (p.93) which is aided by clinicians' and students' display of a particular appearance or demeanour, whilst Sinclair (1997) identified official and unofficial front-stage and back-stage worlds that medical students inhabit. The idealised roles which Goffman (1959 [1990]) describes are reflected in Strong's (1979; Strong and Dingwall 2001) description of the ceremonial order of the clinic which has front-stage and back-stage actions. Examining clinical consultations as social occasions, Strong outlines the roles, demeanours and rules inherent in paediatric clinics. Through patients' and clinicians' discursive and embodied practices, clinical consultations are constructed. The ceremonial order guides the interaction between patients or their

²⁶ I.e. the infant, schoolboy, lover, soldier, justice, pantaloon, and second child of Jaques' monologue in '*As You Like It*'.

representatives and clinicians, constructing idealised versions of each. For clinicians this involves an attributed competence and authority on the basis of appearance, demeanour, location within the clinical situation and membership to '*an expert profession*' (Strong and Dingwall 2001, p. 71). Such ideals are seldom challenged, and are managed in a way which rectifies the situation when they are. Such studies imply that clinical settings such SCSCs will also involve the presentation of idealised images and front and back-stage work.

The performative nature of ceremonial medical work that Strong (1979; Strong and Dingwall 2001) identified highlights a difference between the internal attitude and ceremonially expressed ideals of staff. The difference between the on-stage persona and off-stage expression of opinions about tragedies that staff express, is part of the emotional labour undertaken by them as part of their occupation. Emotional labour is work undertaken at the frontier of service industries' engagement with the public. First used in a study of flight attendants and debt collectors (Hochschild 1979, 1983), it is a form of '*wage-labour*' (Brook 2009, p. 531) involving the demonstration of an emotional state, either through induction or pretence, in order to manage others' mental states (Hochschild 1983). The performance of emotional labour is part of individuals' social-construction of identity (Atkinson and Housley 2003). It is a proactive way of regulating service encounters (Ashforth *et al.* 2008), and within biomedicine involves portraying '*a kindly, trusting concern for the patient*' (Hochschild 1983, p. 151). An approach which might be expected in situations where patients feel vulnerable such as SCSCs.

Biomedical treatment requires clinicians to work with sentient beings as well as inanimate objects (Strauss *et al.* 1985 [1997]). As a consequence emotional labour is an essential component to the delivery of care, and involves the hard work of deliberate attention and situation-specific action which can be '*sorrowful and*

difficult, [demanding] that the labourer gives...something of themselves not just a formulaic response' (James 1998, pp. 219-220). Analysis of the origin of emotional labour has demonstrated it to be autogenous or enacted as a job 'persona' (Huynh *et al.* 2008), whilst analysis of its purpose has shown it to be 'job-focused' (i.e. demanded by the job role) or 'employee-focussed (i.e. enacted by employees to meet jobs' demands) (Brotheridge and Grandey 2002). Individuals in emotionally demanding work situations such as SCDCPs may therefore find themselves consciously or automatically undertaking emotional labour both as an integral part of their job, and as a way of personally coping with work situations. DeCoster (1997) described the management of another's emotions as part of one's healthcare role as 'emotional treatment'. Emotional labour has long been recognised as a significant part of nursing (Bolton 2000, 2001; Henderson 2001; James 1992; Kelly *et al.* 2000; Smith 1992, 1998). In contrast the emotional labour involved in dental care has rarely been studied despite its importance to the work that dental professionals undertake (Johnson *et al.* 2010; Sanders and Turcotte 2010). Sanders and Turcotte (2010) examined the occupational stressors of dental hygienists, and found that emotional labour was part of their role when providing noxious (i.e. painful) treatment to patients. As pain and anxiety management are inextricably interlinked (Meechan *et al.* 1998; Nettleton 1992), emotional labour is likely to be a significant part of treatment provision within SCDCs.

The use of emotional labour has been reported as reflecting gender roles, so that caring jobs involving emotional skills are thought to be the responsibility of female workers (Erickson and Grove 2008; Gray 2009; Nettleton 2006b). Its use has also been shown to reflect professional barriers, with doctors being detached in order to '*get on with the medicine [whilst] the nurses deal with the emotions*' (Gray 2009, p. 173). In James' (1992) study of hospice care, an inverse relationship between status and emotional labour existed, with the medical director professing a lack of

competence whilst the nursing auxiliaries were relied upon to provide emotional labour. The identified gendered and status-directed use of emotional labour is of interest in examining clinical settings such as SCSCs, to identify whether such divisions are also present in such situations.

Emotional labour is important, because it can have an impact on the potential burnout of its performers (Brotheridge and Grandey 2002; Huynh *et al.* 2008; Kim 2008). Burnout comprises of emotional exhaustion, objectification of others and a felt lack of achievement (Brotheridge and Grandey 2002). It is a risk of dental professionals (Gorter *et al.* 1999; Gorter and Freeman 2011; Rios-Santos *et al.* 2010; te Brake *et al.* 2003), with a variety of risk factors including difficult patients such as those with dental anxiety (Gorter and Freeman 2011). Whilst the use of emotional labour can increase the risk of burnout in some individual situations, the relationship is complex as it can also lead to an increased sense of accomplishment and job satisfaction (Huynh *et al.* 2008), especially if work involves frequent contact, intense emotions and an expectation of friendliness and empathy (Brotheridge and Grandey 2002), resonates with internal feelings (Brotheridge and Grandey 2002; Yang and Chang 2008) or it is recognised that one is '*doing well towards patients*' (Gorter and Freeman 2011, p. 93).

This cost that emotional labour entails is not commensurate with the rewards received for its performance, as it is not given recognition either within or outside of healthcare (Gray 2009; James 1989; Smith 1992). Within healthcare it is often invisible or discounted (James 1992), and visible emotions are sometimes even discouraged (Gray 2009). Sites where emotional labour may be undertaken such as SCSCs are therefore sites of invisible work, whose frontier display varies in perception depending on the onlooker.

2.5.6 Frontier transition

Whilst social worlds' frontiers require management to defend, facilitate and display, individuals in society also pass across and between them. Such transitions can be examined through the anthropological concept of 'liminality', developed and embellished by Turner (1967, 1969 [1995], 1977, 1979, 1982).

Liminality developed from the 'liminaire' transitional middle stage of 'rites-of-passage' described by van Gennep (1908 [1960]) which govern participants' movement from one social position to another (i.e from childhood to being a tribal warrior). Van Gennep's analysis compared these social transition rituals to those associated with physical movement (e.g. from outside a house to inside it), and proposed that *'[a] society is similar to a house divided into rooms and corridors'* (p.26), with stable positions as well as in-between areas (metaphorical doors and passageways). Individuals taking part in rites left behind their social status and the rights and responsibilities associated with it, and passed through a transition stage during the ritual. Afterwards they re-entered society with a new status (e.g. as a 'man'). Turner explored the liminal²⁷ middle stage of these rituals.

Liminality is *'the state and process of transition'* (Turner 1977, p. 37), and relates to subjects (i.e. individuals, groups and societies), spaces (specific objects and thresholds, areas and larger regions) and time (i.e. specific moments, more protracted periods and longer epochs) (Thomassen 2009). Figure 2.3 illustrates both the pre-industrial concept of liminality and analogous situations in post-industrial society applied to individual subjects. All three individuals- the boy, fiancé

²⁷ Liminality derives from the Latin *'limen'*, meaning 'threshold'- the part of a doorway which is crossed between one room (or social position) and another, and was referred to as 'liminaire' in van Gennep's original thesis.

and PhD student, enter temporary situations which are neither their original role with attendant responsibilities, nor their final intended status. Instead they are passing ‘*betwixt and between*’ (Turner 1969 [1995], p. 95) one social state and another as ‘*liminal personae*’ (Turner 1967, p. 96).

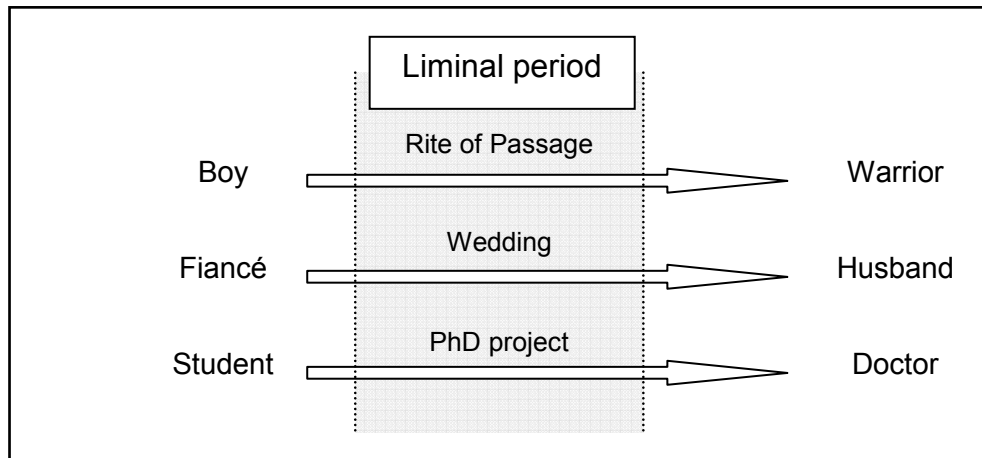


Figure 2.3 Liminal transitions

Liminality is potentially transformative for such individuals, as it provides an opportunity for them to examine and reflect upon previously taken-for-granted components of social order in a new light. As they leave one state and are yet to enter another, their liminality breaks social situations into noticeable components rendering the familiar ‘see-able’ by placing them in unfamiliar and abstract conditions²⁸. After these liminal periods, the elements are reassembled into a structured society which the participant can now regard with greater understanding in their new social role (Turner 1967). Liminality can be a period of learning which fundamentally changes participants. This disassembling and consideration of the components of accepted patterns means that it is full of potential as, like Lego®, the pieces can be put back together in new combinations. Such ‘*new ways of acting*

²⁸ For example, by involving rituals where humans dress as animals or men dress as women or androgynously, such periods of time allow concepts like human/non-human, man-woman to be examined by tribal neophytes. For doctoral students, the process of research training allows the outwardly-tidy product of research to be examined as a messy learning process.

[can be] tried out, to be disregarded or accepted' (Turner 1977, p. 40). Such potentially transformative reflexive opportunities may of relevance to anxious patients attending SCSCs.

Liminality has been used to examine patients who enter a *"pilgrimage' to hospital'* (Menkes *et al.* 2005, p. 2571) in a variety of contexts. Such individuals commonly experience liminality (e.g. between sickness and health), with uncertain statuses during and following treatment (see for example Allan 2007; Crowley-Matoka 2005; Durham *et al.* 2010; Forss *et al.* 2004; Little *et al.* 1998; Navon and Morag 2004; Nettleton 2006a; Scott *et al.* 2005). Menkes *et al.* (2005) identified several ways in which treatment for intracranial lesions with stereotactic radiosurgery creates liminality for patients. Such individuals leave their usual social milieu to travel to hospitals for investigations and treatment; the technology of treatment involves clinical ritual; surgical aspects affect their physical integrity and self-image; treatment requires isolation in the irradiating machine; and treatment outcomes are uncertain. Sedation treatment within SCSCs mirrors several of these characteristics: patients attend University dental hospitals rather than local dentists; they take part in 'the ceremonial order of the clinic' (Strong 1979; Strong and Dingwall 2001); they are connected to machines and have their physical integrity pierced by cannulae in the case of intravenous sedation; and become mentally isolated by the sedatives' dissociating effect, although their presenting dental disease is addressed their anxiety outcomes are also uncertain. Allan's (2007) discussion of fertility treatment highlights the potential of specialist clinics such as fertility clinics or SCSCs to contain the liminal status of attending patients, and to be liminal spaces themselves, where roles and identities are constructed and accepted or rejected. Within dentistry, liminality has been used to describe the experience of patients with Temporomandibular Disorders (TMD). Like other patients with 'chronic illness', such individuals find themselves in an uncertain position between acute sickness and

health (Durham *et al.* 2010). Other than this study, the concept of liminality has not been demonstrably applied to dental research.

Psychologically orientated studies have also highlighted the importance of liminality. Beels (2007) discussed therapeutic interventions (such as psychotherapy, alcoholics anonymous groups and family-group treatment of schizophrenia) as liminal rites-of-passage where participants could perceive themselves as on a journey of transformation, although unlike most biomedical studies he focussed upon the witnessed nature of such treatments rather than the individualistic nature of biomedical consultations and treatments. Warner and Gabe (2004) discussed the use of liminality in the management of individuals with unclear mental health statuses, and found that such individuals were difficult to place- falling betwixt and between treatment in hospital and local community settings. The analysis of the treatment of patients with psychologically orientated problems such as dental anxiety may benefit from using liminality as a 'working hypothesis' (Geer 1964) to examine their status and place in society.

Van Gennep's (1908 [1960]) domestic metaphor of society has been developed so that as Warner and Gabe's (2004) study demonstrates, in addition to roles, locations are recognised as part of a liminal socio-spatial interaction (Postles 2007; Preston-Whyte 2004; Pritchard and Morgan 2006; Shields 1991). These spaces may link states of 'being', such as hospices (Bruce and Davies 2005), training spaces (Buckingham *et al.* 2006; Philo *et al.* 2005) or immigration detention centres (McLoughlin and Warin 2008). By attending liminal areas such as SCSCs, patients may become liminal themselves and therefore open to the transformative potential of such spaces and states. Liminal spaces can link outside physical worlds with inner spaces (Beckham 2004; Davison 2008; Postles 2007), and by application can also potentially act as hinterlands to social worlds such as dentistry. Indeed as '*an*

undoubtedly infernal liminal [space] was the No Man's Land of WWI trench warfare' (Trubshaw 1995 [2008]), they can function to ease the proximity of antagonistic and incommensurate worlds. This hinterland role may be present in SCSCs' position between the social world of dentistry and anxious patients who feel an *'existential threat'* (Abrahamsson *et al.* 2002a, p. 190).

Turner's (1977, 1979, 1982) and subsequent authors' analyses of liminality highlight the potential for it to develop from part of the linear process van Gennep (van Gennep 1908 [1960]) described. Turner describes a liminal-like (liminoid) experience that individuals can enter in post-industrial society which carries some of the characteristics of liminality, but without its transformative role. In addition, some individuals enter into liminal roles which have no anticipated or seen conclusion.

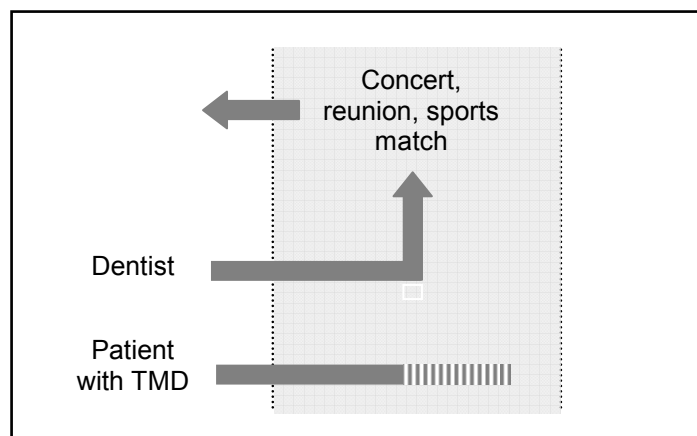


Figure 2.4 Liminoid experiences and permanent liminal states

Figure 2.4 illustrates both perma-liminal²⁹ and liminoid phenomena in post-industrial society. By attending a rugby match, I enter a temporary period of withdrawal from my social position and responsibilities, and become an anonymous 'fan' engaged in the ceremony of the game. However, at the end of the match I return back to where I was in society unchanged rather than viewing my milieu in a new and transformed light. Patients with some diagnoses (and their relatives) find themselves in an

²⁹ My phrase for permanent liminal states.

unending position of uncertainty between sickness and health (see for example Durham *et al.* 2010; Forss *et al.* 2004; Harrow *et al.* 2008), and permanently exist in a liminal limbo-state. Such potential trajectories highlight the potential for SCSC attendance to also be an unchanging event, or one which introduces an unending uncertainty of status.

The research in liminality raises questions about the outcome of patients' attendance to secondary care settings such as SCSCs. Do such environments have a transformative potential, or are they 'events' to be experienced? Are they discrete episodes or do they become open-ended engagement? With regard especially to sedation- a treatment where patients are 'betwixt and between' consciousness and unconscious general anaesthetic treatment, how is such a liminal state experienced?

2.5.7 Summary

The social nature of dentistry (Nettleton 1992) means that insights developed within the social sciences should be fertile intellectual ground for analysing dental phenomena (Ross 1965), especially as social worlds theory and its related concepts have been usefully applied to aspects of biomedical research. The engagement of anxious patients with secondary care dentistry may be fruitfully understood utilising theories about frontiers to understand research data. SCSCs may be sites of boundary demarcation and defence between different professional groups. The sedation technology and encompassing SCSC may have the potential for multiple interpretations, and may be facilitative or inhibitory to interaction between patients and clinicians. SCSCs may be sites of display and emotional labour, and potential sites of transformation, permanent liminality or temporary liminoidity.

One aspect of the engagement of different social worlds is the situation in which they occur (Blumer 1969; Clarke 2005). Further insight into this engagement may be developed from consideration of a specific social site where different worlds interacted- the parlour (Figure 2.5).

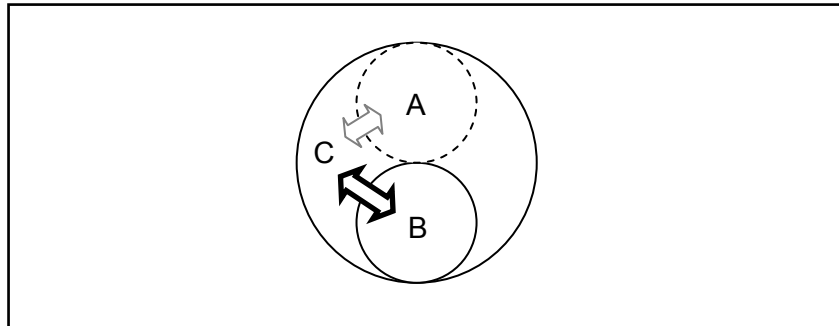


Figure 2.5 Hosting frontier work

The social science research highlights a variety of frontier work, but also demonstrates a gap in the knowledge about the interaction between worlds where one hosts another. Figure 2.5 illustrates an adaptation of the boundary organisation, building upon Huitema and Turnhout's (2009) observation of their tendency towards advocacy. Parlours are sites which contain the frontiers between social worlds, but have different levels of differentiation between inhabitants. Some are 'visitors' (world B) whilst others (like family members) have less robust and differentiating boundaries from the host world (A). Such a model may be useful to analyse the situation of dental anxiety treatment within secondary care dental settings such as SCSCs.

2.6 Conclusion

This chapter has reviewed the dental and social science literature pertinent to the interface between patients and dentistry within SCSCs. It has identified gaps in the current knowledge of sedation provision and the sociology of health and illness. The

next chapter outlines the research process undertaken during this study. It will explore the research questions that drive this study, and the methods undertaken to address them.

Chapter Three - The Research Process

3.1 Introduction

This chapter provides an account of the research process undertaken in this study. Throughout the course of the research I kept a journal to record decisions, concerns, experiences, insights and 'things to do' (Charmaz 2006; Delamont 2002; Hammersley and Atkinson 2007; Spradley 1979). By drawing upon excerpts from this journal and the methodological literature I will discuss the choices made in this study, the methods used, and the consequences of those choices and methods.

This study used semi-structured interviews to explore the understanding of secondary care sedation provision by those affected by it. This chapter reiterates the research aims before exploring the approach taken to address such concerns. I discuss the study design, outlining issues of sampling, access, impression management and the practical aspects of conducting semi-structured interviews. I reflect upon my role and the ethical aspects of such research, before discussing the methods used to analyse and represent the data.

3.2 The Research Question

The study is an exploration of the process of treating anxious adult dental patients within SCSCs. Rather than focussing asymmetrically and specifically upon the patients' experience (Graham 2006), it seeks to understand and account for what is going on through a variety of clinical and lay voices. The research questions sought to understand the multiple meanings of SCSC treatment:

- **How do patients and dentists engage with conscious sedation provided in University-based Secondary Care Sedation Clinics?**
- **What are participants' expectations and understandings of Sedation and Secondary Care Sedation Clinics?**
- **What is the impact of sedation provision?**
- **How do sedation clinicians provide sedation?**

3.3 Method Choice

There are multiple methods to conduct qualitative research, reflecting its complex nature (Denzin and Lincoln 2005b), and the choice of method should be appropriate to the research aim (Silverman 2010). This study is primarily based upon the conduct of semi-structured interviews augmented by personal professional knowledge and activities³⁰. The choice of interviews, rather than observation as part of an ethnographic approach, was undertaken for pragmatic and ethical reasons.

3.3.1 Ethnography

Ethnography is a form of participant-observation research which involves extended periods of time immersed in a social setting, observations of events, recording of (un)solicited conversations and interviews to augment observations, and the collection of documents and other artefacts which lead to an understanding of a local culture and behaviour within it (Bryman 2008; Hammersley and Atkinson 2007). Observation-based research provides data in 'natural' conditions and information about the working of organisations and members' actual actions (Mays and Pope 1995). It therefore allows researchers to attend to tacit, context-dependent and deviant activity as well as activities participants explicitly express (Bryman 2008). Ethnography can generate in-depth knowledge about settings such

³⁰ For example, though not included in ethical approval, attendance at professional conferences as part of my job provided me with information and experience which is impossible to disentangle from my subsequent investigation and analysis.

as clinics and wards (Green and Thorogood 2009), and is a viable method for qualitative research in dentistry (Barker and Horton 2008; Horton and Barker 2009; Nettleton 1986, 1992; Owens and Saeed 2008). Despite this, within my research I felt I had an inability to observe due to the potential impact of my visible presence on vulnerable participants and the conflict in role between participating clinician and observing researcher.

Dentally anxious patients are often worried about the number of people on the clinic. An additional observer with no obvious purpose could add to their anxiety and would not be protective of them as participants (Brannen 1988). As a qualified sedationist, there could also be the possibility that my apparently 'aimless' presence could either create a resentment from the busy staff, or that I might be called upon to help out and thereby lose the opportunity to observe as I moved further towards the total participant role. Such 'role conflict' (Stryker and Macke 1978) is a recognised risk of qualitative research (Bloor *et al.* 2007, 2010). These impacts on both participants and myself made an ethnographic approach practically and ethically untenable.

3.3.2 Auto-ethnography

A possible alternative to the ethnographic observer-participant role was the use of my own experience as a SCDP to produce an autoethnography of sedation provision. Autoethnography is a form of qualitative research where reflexivity is an integral part of data collection (Ellis and Bochner 2000). With this approach '*the goal is to use your life experience to generalise to a larger group or culture*' (p. 737). Such research can use qualitative research's diverse forms of representation such as traditional 'scientific' journal articles, dialogue, drama, poetry and fiction, which can aid analysis as well as data presentation (Coffey and Atkinson 1996).

There are many criticisms of autoethnography. Coffey and Atkinson (1996) caution against novelty for novelty's sake. They insist that writing must be for an analytically useful purpose and relevant to the anticipated audience. In writing qualitative research, the potential audience, level of study focus (e.g. individual participants, events, or processes), and the discipline's everyday style (i.e. work pattern, thinking, and language) all influence its form. In addition to its perceived relevance as a written form of research presentation, autoethnography has also been critiqued as a research method. Delamont (2007, 2009) argues that autoethnography's self-focus cannot fight familiarity; cannot preserve anonymity of participants; is more experiential than analytical; prevents sociological analyses of power and ethical consideration of 'sides'; focuses upon social scientists rather than other worlds; and by focussing upon the researcher rather than society is an unethical use of limited research funding.

Consequently interviews were chosen as a method to obtain accounts of participants' understandings of SCSCs. Rather than constrain responses by a rigid survey structure which forces responses into predetermined options, semi-structured interviews were chosen as the method of investigation as (whilst guiding discussion) such an approach allows researchers to '*understand the world from the subjects' point of view, to unfold the meaning of people's experiences, [and] to uncover [their] lived world...*' (Kvale 1996, p. 1).

3.3.3 Semi-structured Interviews

Interviews are ubiquitous, permeating our cultural life and our understanding of 'self' through commercial and professional forms (Atkinson 2009; Rapley 2007). The widespread use of interviews in everyday life has led to the labelling of modern Western society as 'the interview society' (Atkinson and Silverman 1997; Gubrium

and Holstein 2002). Interviews are ‘speech acts’ (Austin 1976)³¹, and as such, are opportunities to account³² for behaviours and beliefs (Coffey and Atkinson 1996; Hammersley and Atkinson 2007; Silverman 2010). Such accounts seek to create a ‘moral order’, and are occasions where cultural knowledge is displayed through interactions (Baker 2004; Coffey and Atkinson 1996).

Reflective of this interview-orientated society, qualitative interviews are a commonly used social research method (Gubrium and Holstein 2002; Silverman 2010). Qualitative interviews enable access to information which is difficult to otherwise gain (Gobo 2008; Hammersley and Atkinson 2007), and are friendly ‘professional conversations’ or ‘conversations with a purpose’ (Burgess 1988; Kvale 1996; Spradley 1979) aimed at eliciting information through rapport rather than intimidating interrogation. In addition to eliciting what Seale (2004) calls ‘data-as-resource’, interviews can also attend to ‘data-as-topic’, focussing upon the ‘how’ of meaning creation rather than the ‘what’ of information. Outside of a purely sociological approach, which seeks to understand how participants construct and represent their world, this isn’t the sole reason to interview as participants do have genuine beliefs and experiences which they should have the opportunity to voice³³. By combining both approaches to data, the ‘active interview’ (Miller and Glassner 2004) attends to the interview process as well as providing knowledge about the interview subject, and was a useful concept to inform my interview technique, by encouraging me to consider what participants were ‘doing’ in the actions they

³¹ A speech act is an action using words to achieve a certain purpose, such as explain, justify, excuse or account for things.

³² Account in terms of descriptive reporting, summarising, explaining and narrative justification.

³³ Attention to ‘accounting’ practice (process versus content) ignores the fact that reality as portrayed is of value. Whilst witnesses in judicial trials undertake various speech acts such as accounting for their actions, the actual beliefs and perceptions of witnesses regarding events are of prime interest to the trial, and eventually through a comparison of perspectives a decision on guilt has to be made by the jury.

reported, in the motivation for those actions, and in the accounting of those actions to me. In contrast to standardised structured interviews or surveys, semi-structured interviews are dialogic processes which allow interviewers to 'scaffold' interviewees to enable them to explore areas of their existence that they might not normally consider on their own. This is part of a *'fusion of horizons'* (Gadamer 1975 [2004], p. 367) which allows the interviewer and interviewees to understand both themselves and the phenomenon under discussion. Such interactive research requires a reflexive approach on behalf of the researcher, with an awareness of the interview process, their theoretical orientations, skill, and identity in order to explore quality data (Nunukoosing 2005).

3.3.4 Setting

The study took place in five geographically diverse University-based SCSCs within the United Kingdom between May 2008 and May 2010, following the granting of NHS Trust and Multi-site Ethical approval in February 2008 (Appendix 1). It was initially conceived as a study of sedation provision within one specific 'emblematic'³⁴ geographic location. However unlike research in some local settings such as schools or accountancy firms (Coffey 1993; Pugsley 1998), the relatively low number of clinics would render anonymity of SCDPs difficult, if not impossible. Whilst Atkinson (2006) asserts that impossibility of anonymity is not always a problem to be worked around, within this research I felt that the potential impact of my research on SCDPs could be significant, both by affecting answers in anticipation of identification and also in terms of future intra-disciplinary relations following identification. As a consequence the field of research was deliberately widened.

³⁴ Emblematic sampling uses situations, places and people as typical cases (Gobo 2007).

3.4 Sampling

Although there are multiple potential influences upon the treatment journey of anxious patients (See the Situational map in Appendix 2), the main 'players' in the situation are the initiators of the treatment pathway- the referring primary care dental and medical professionals (PCDPs and PCMPs respectively); the receivers of the treatment- the patients themselves; and the providers of the treatment- the SCDPs and students). Referring clinicians have requested a service to be undertaken on their behalf and have a duty of care to explain what they have referred their patients for. Patients have opinions both about their initial expectations, but also their actual experience of treatment within a SCSC. Providers have a responsibility both to the patients they treat, but also the clinicians on whose behalf they were providing treatment.

Having identified the key groups as initiating referrers, participating patients and providing staff, participants were chosen depending on their usefulness in addressing the research question (Green and Thorogood 2009). This was an 'organic' practice which developed iteratively as the research progressed, rather than statistically driven (Figure 3.1).

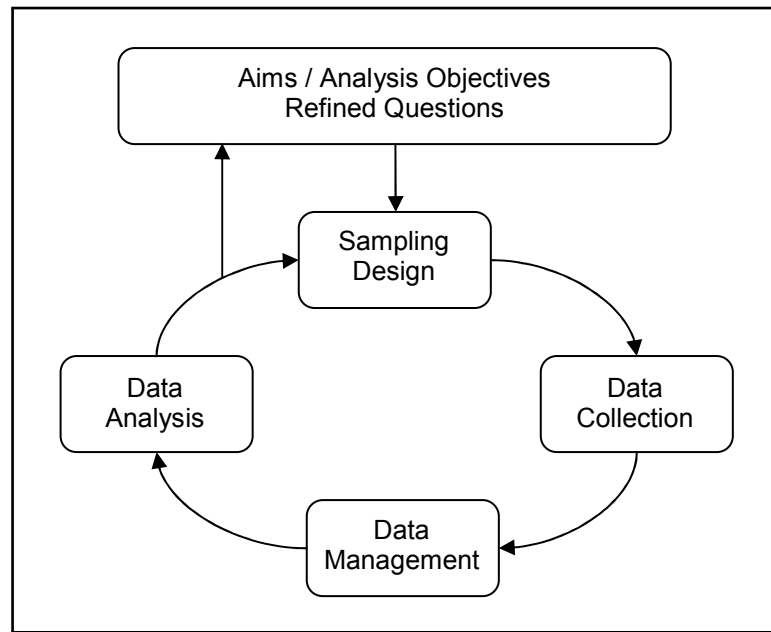


Figure 3.1 Simplified diagram of the iterative qualitative research process (Crabtree and Miller 1999, p. xvi)

Through such *'purposive sampling'* (Bryman 2008, p. 458) I sought to speak to key informants and look for variations of evidence to expand and clarify ideas. As the analysis developed, the sampling became more theoretically driven, seeking data based on their relevance to the research stance and direction, especially their ability to develop, test and expand the emerging hypothesis (Glaser 1978; Glaser and Strauss 1967; Mason 2002). Thirty one participants were included in the research: nine patients and twenty two health care professionals (thirteen sedation staff, eight referrers and one non-sedation secondary care dentist) (Tables 3.1 - 3.3). All participants chose the location for the interview, which was recorded with a Sony ICD-SX78 digital (mp3) recorder and subsequently transcribed.

3.4.1 Access: Getting In and Getting On

Access to research sites and participants is a concern for all researchers, hampering research if incomplete (Hammersley and Atkinson 2007). Such access is

both physical and social ('getting in' and 'getting on' respectively) (Gobo 2008) and as qualitative research is participatory by nature, at some level requires the researcher's acceptance in order to be granted. Entrée to research fields is sometimes facilitated by a 'gatekeeper'- an individual with the ability to grant access to other participants (Bryman 2008). As a clinician, to some extent I was an 'insider' researcher. I did not require a formal gatekeeper in the same way as someone coming from outside an organisation as I already had access to patients, staff members and referrers through my professional role and relationships. However, despite my legitimate role I still felt it would be politically appropriate to approach the clinical lead for 'permission' to research the clinic in Cardiff. As a consequence they became my 'sponsor' (Bryman 2008, p. 407) and the research invite letters were sent in their name (Appendix 3). This sponsorship also facilitated access to SCSCs in other hospitals where I had no legitimate presence, as the clinic leads all knew each other through the Dental Sedation Teachers Group (DSTG). Once I had gained rapport with these individuals, they in turn became gatekeepers and sponsors, offering access to participants within their respective units.

Access is not a once-and-for-always event in order to enter a setting, but is ongoing as it has to be negotiated with each potential participant. To make access less tortuous, Bryman (2008) suggests '*playing up to credentials*' (p. 409) by using experience and knowledge of the area of study. This tactic was employed throughout the project, and once initial contact had been achieved via the invite letter, subsequent conversations involved times where I emphasised my PCDP credentials and previous experience of the NHS contract with PCDPs, or my hospital experience of sedation service provision with SCDPs, in order to build rapport with each group and to thus encourage their help with my research.

3.4.2 Interviewing Referring Clinicians

Interviews were conducted with nine referring clinicians in order to explore their understanding and experience of the referral process for treatment with sedation and its various anticipated and experienced outcomes (Table 3.1). A retrospective audit was carried out in August 2007 of all patients who had been sent assessment appointments within Cardiff University's SCSC between 1st January 2006 and 31st December 2006 (Woolley 2009). From the audit, clinicians who had referred patients within this period were identified from referral letters. Eighty two percent of referrals (n=252) were received from primary care services (seventy six percent from dentists working in the GDS and six percent from doctors), and a list was drawn up of these referrers. The average number of referrals per clinician per annum was 1.68, although some clinicians had referred significantly more than this number, and such 'serial referrers' were also identified. Invitation packs were sent to batches of ten referrers posted to their listed address on the dental register or referral letter, inviting them to participate in the research (Appendices 3 and 4). Referrers were divided into lists of those who had referred less than the average number of patients (i.e. one) and those that had referred more. Equal numbers were invited from each list on a convenience basis. Packs contained an invite letter from a senior colleague at Cardiff University School of Dentistry, an information leaflet, a reply / consent form, and a freepost reply envelope. After a fortnight the pack was resent, and finally after another week I telephoned clinicians' practices to invite them personally. If invited participants declined to take part, no further contact was made with them. The process was repeated with other referrers selected from the list until no further participants were required. Thirty referrers were invited to participate, of which twenty one declined to take part. Only one medical practitioner agreed to participate. Only referrers to Cardiff SCSC were interviewed due to the practicalities of geographical location.

	'Name'	Location	Gender	Age	Participant Type
1	PCDP1	Work	F	28	Referrer (dentist)
2	PCMP1	Home	F	33	Referrer (doctor)
3	PCDP2	Work	M	33	Referrer (dentist)
4	PCDP3	Home	M	48	Referrer (dentist)
5	PCDP4	Work	F	31	Referrer (dentist)
6	PCDP5	Work	F	-	Referrer (dentist)
7	PCDP6	Other (coffee shop)	F	34	Referrer (dentist)
8	PCDP7	Hospital	M	29	Referrer (dentist)
9	PCDP8	Hospital	F	34	Referrer (dentist)

Table 3.1 Referrer participants (- missing data)

Interviews lasted between forty six minutes and one hour twenty two minutes. They generally took place within clinicians' practice premises, often at lunchtime. The clinical surroundings were a physical reminder that such interviews were within the only 'down time' of their working day, and of those conducted at work the duration was under fifty six minutes. Some interviews were conducted at clinicians' homes, some in a room on University premises, and one in a coffee shop. At the start of each interview I asked how much time they had available in order to keep within this time-frame, orientate them to the research, and make both our 'peer' relationship and my 'social scientist' role overt.

3.4.3 Interviewing Patients

Nine interviews were conducted with previous patients of Cardiff SCSC³⁵, to explore their experiences of sedation treatment, and its social and personal impact (Table 3.2). Patients were identified from referral letters examined in an audit of sedation referrals (Woolley 2009), as well as from logs of clinical activity kept with the SCSC. Information packs containing an invite letter from a senior colleague at Cardiff University School of Dentistry, an information leaflet, a reply / consent form, and a freepost reply envelope were sent to patients at their home address (Appendices 3

³⁵ As with referring clinicians, the practicalities of interviews was constrained by the practicalities of visiting geographically diverse locations.

and 4). As with referring clinicians, a further invite with enclosed information and consent forms was sent a fortnight later if no response was received, and a telephone call made a week later. Thirty eight patients were invited by post, of which twenty nine declined to participate. In addition, information packs were prepared and left on clinic for staff to hand to patients on their last clinical visit. Only one of these packs which relied on clinical staff as gatekeepers was returned to me. On contacting the patient, they then declined to take part in the study. Despite my attempts to ensure that I had not met participants prior to the study, I had treated one patient participant (Olivia) previously. I only realised this when I arrived at the interview. To reduce any influence my past treatment of her might have on her participation I was clear that I was interested in any aspect of her experience of sedation but I wanted her to talk about sedation with reference to the treatment she had had with other clinicians rather than myself. I tried to present myself as completely open and accepting of any views that she could give, so that she would not provide the answers she thought I wanted to hear or which she felt she should give to preserve rapport.

	'Name'	Location	Gender	Age	Participant Type
1	Grace	Home	F	76	Patient
2	Ruby	Hospital	F	23	Patient
3	Jack	Hospital	M	28	Patient
4	Olivia	Work	F	43	Patient
5	Thomas	Home	M	59	Patient
6	Eve	Hospital	F	59	Patient
7	Oliver	Home	M	62	Patient
8	Joshua	Hospital	M	23	Patient
9	Harry	University	F	41	Patient

Table 3.2 Patient participants.

Interviews lasted between forty one minutes and one hour forty nine minutes, and took place at patients' homes, places of work, within a non-clinical room within the dental hospital or in private rooms on other Cardiff University premises. Interviews

took place on separate days from any ongoing sedation treatment. Having established a time limit for the interview, I emphasised my identity as a student and social scientist, whilst usually omitting my identity as a dentist (see later).

3.4.4 Interviewing Sedation Providers

Semi-structured interviews were conducted with thirteen SCDPs, to identify their perspectives and accounts of practice regarding sedation provision within SCSCs (Table 3.3). Interviews were carried out with a range of clinicians, including nurses, speciality doctors, clinical lecturers, and consultants. Sedation staff were identified through discussion with colleagues, membership of specialist interest society committees, presentations at specialist society meetings, and publications within the dental literature. Information packs containing an invite letter from a senior colleague at Cardiff University School of Dentistry, an information leaflet, a reply / consent form, and a freepost reply envelope were sent to their work address. In addition, some sedation staff were invited by electronic mail with the information sheet and consent forms attached (Appendices 3 and 4). Invites were sent to consultants and lead clinicians from six University-based SCSCs within the UK inviting them and their staff to participate. After a fortnight, an email was sent reiterating the invite and my interest in hearing their perspectives due to their '*status in the sedation community*'. Fifteen sedation staff were invited, of which two were unable to arrange a mutually convenient interview time.

	'Name'	Location	Gender
1	SCDP1	Work	F (7), M (6)
2	SCDP2	Work	
3	SCDP3	Work	
4	SCDP4	Work	
5	SCDP5	Work	
6	SCDP6	Home	
7	SCDP7	Teleconference	
8	SCDP8	Work	
9	SCDP9	Work	
10	SCDP10	Work	
11	SCDP11	Work	
12	SCDP12	Work	
13	SCDP13	Teleconference	

Table 3.3 Sedation staff participants.

Interviews took place face-to-face, in offices or seminar rooms at SCDPs' hospitals, or via teleconference facilities for two participants. As with referring clinicians, I asked how much time they had to spare at the beginning of the interview before orientating them to the 'rules' within which the interview was to take place³⁶. The interviews lasted between thirty six minutes and two hours seventeen minutes, and kept within the allotted time-frame in all but two interviews. In these interviews I acknowledged that the time had run out, but they were happy to carry on. In addition to interviews, those clinicians I interviewed in person also gave me a tour of their facilities, providing commentary of an interview-like nature in the accompanying conversation. Such unrecorded information was subsequently referred to by me within the interview in order to explore further, and was also written down later in field notes.

Members from different participant groups were invited and interviewed throughout the entire iterative process rather than in distinct 'batches' of participant type.

³⁶ I.e. that although I had '(contributory) expertise' (Collins and Evans 2002, 2007), they were to regard me as ignorant about *their* particular practice, and to bear with 'obvious' questions.

Although participants are chosen during the research process, there is no guarantee that everyone whom one might wish to interview will be willing to participate (Hammersley and Atkinson 2007). Referring clinicians were, as a whole, too busy to give up time for an interview. Whilst those of most interest, identified as 'serial referrers' (Woolley 2009), were likely to be the least interested in participating, a similar proportion of referrers from both groups declined to take part. The patient population are anxious about dentistry, and the invitation to engage in discussion about a facet of life they may wish to ignore had a low uptake despite both written and verbal invitations and a freedom to decide the interview location. Sedation staff members were theoretically willing to participate, although consultants and unit directors were difficult to get hold of³⁷ and had constraints upon their time, a problem associated with 'elite interviews' (Green and Thorogood 2009). An equal focus upon clinicians' and patients' views about SCSCs was therefore not only appropriate due to the lack of attention to clinicians' experiences in much sociological research (Graham 2006), but also pragmatic due to the difficulty of access to participants.

Despite difficulties in gaining access to participants, sampling was only stopped when data no longer added to, or challenged, developing hypotheses. Saturation appeared to have been reached with a total sample of 31 (9 – 13 per group) reflecting other researchers' experience of dental settings (Sharpe *et al.* 2007; Soheilipour *et al.* 2011a, b). In addition to limiting sampling by '*theoretical saturation*' (Glaser and Strauss 1967, p. 61), avenues of investigation were also deliberately not followed or explored in order to make the project 'do-able' (Green and Thorogood 2009). For example, initial ethical approval was granted for an interview-

³⁷ Recruiting consultants generally required several emails and telephone calls to finalised arrangements following their initial agreement to take part. Some consultants failed to get back to me despite their expressions of interest and promises to telephone, and eventually I had to leave them out of the study for fear of them feeling harassed.

based study with patients and qualified dentists. As the study progressed, it became apparent that one potential strand of investigation could be the impact of sedation training on undergraduate students' interactions with patients, and that useful information on the actual practice of sedation provision could be provided by ethnographic observation. The addition of these facets to the data sampling would require new ethical approval which was not possible within the time constraints of the project, and as mentioned previously might create a role conflict³⁸. Another emergent avenue in the data was patients' use of the internet to get information about sedation treatment. Whilst this was interesting, it was not followed as it was out of the scope of the research questions.

3.5 Conducting the Interview

A flexible interview guide (Appendix 5) was developed to provide an initial structure to the research. '*Foreshadowed problems*' (Malinowski 1922, p. 7) and '*working hypotheses*' (Geer 1964, p. 384) derived from personal experience and the literature guided the construction of pertinent questions. In addition, following Mason's (2002) suggestion, the main research question was divided into constituent sub-questions, the topics at the core of these sub-questions identified, and questions composed that related to them. Finally a check of internal consistency was made by cross referencing the final questions with the main and sub questions (i.e. do sub-questions inform the main questions as well as derive from it?). This guide provided a range of potential questions as prompts if my mind went blank, and encouraged '*reflexive questioning*' (Hammersley and Atkinson 2007, p. 117) which covered issues rather than slavishly followed specific questions. This semi-structured approach allowed specific situations to be explored and reflected upon, so that the

³⁸ As discussed later, observation within this particular clinic may not be ethically tenable even if approval had been given.

interview was more like a 'conversation with a purpose' (Burgess 1988), ensuring that topics of interest were covered, but allowing flexibility for participants to talk around those topics and add others of interest to them. As the research progressed the guide was modified to include areas of analytic relevance and omit those deemed redundant³⁹. An initial pilot interview was conducted and reviewed with a supervisor to critique style. Further interviews were later reviewed for structure to ensure that a range of open-ended and focussing questions were used, and that the interview was participant led.

Before the interviews I tried to prepare by making notes of key issues of interest, and to familiarise myself with the up-to-date schedule. The opening moments of an interview can be significant in establishing tone and form (Hammersley and Atkinson 2007), involving negotiations about interview structure, informed consent, matters of confidentiality and the use of a digital recorder. Once started, the pace of the interview, the presence of digital recorders, and the manner and response of the interviewer are significant factors in a good interview. Rather than advocating specific methods to gain access, build rapport, and avoid bias however, Rapley (2007) recommends a pragmatic approach, urging researchers to '*get on with interacting with [participants]*' (p. 16), and respond as appropriate in the research situation. In following this advice, I sought to construct the interviews I conducted as '*friendly conversation[s]*' (Spradley 1979, p. 58).

Having outlined the 'rules of engagement' with participants, I explained why I was digitally recording the interview, and the use and storage of the data as audio files and transcript material. I emphasised the confidentiality of participants' responses and that I would anonymise data when quoting, and participants were told they were

³⁹ For example early guides included topological questions which were later omitted, whilst other questions arose out of data such as the exploration of the emotional impact of sedation provision.

free to withdraw consent at any time, though none did. Interviews typically started with 'grand tour' questions (Spradley 1979) such as "can you tell me a bit about the clinic?", which allowed participants to provide minimally directed accounts in their own words. Unstructured follow-on questions were used to encourage elaboration of answers (e.g. "Can you say a bit more about that?"), clarify meaning and ensure comprehension (e.g. "Do you mean they are using it as GA?"). 'Native language' questions (Spradley 1979) such as "How would you describe the treatment you had to a friend at work?" were occasionally used to understand participants' own perceptions, rather than imposing them through the wording of my questions. Despite concerns about the over-reliance upon interview data in social research (Atkinson and Silverman 1997), it might be expected that 'the interview society' has normalised the interview experience for participants. Participants were *au fait* with the concept of interviewing and generally seemed comfortable participating in such an interactive style. After each interview, I wrote down my impressions in my research journal, noting details about the setting it was held in, how the participants seemed and my experience- how I felt during and about the interview, and any significant events that had occurred before, during or afterwards.

I held an interview with a staff member at their house. I found it really difficult to do. To start with, as I expand my thoughts and write them down I have ended up with 4 pieces of paper with multiple questions on to prompt me, and I was aware that I didn't hold in my head the key questions I wished to ask. I had too much stuff and was too reliant on my props rather than it being a naturally flowing conversation. My questions didn't always naturally flow from what they said and I changed tack every now and again, which showed as mild confusion / annoyance on their face and meant some of my questions were subsequently unclear. Having an interview after lunch also meant I was quite sleepy and lethargic. I found it difficult to be 'on the ball', know where I was going and respond appropriately. I'm not really sure I've got anything of worth for the project now.

[Extract from field journal 22.07.09]

By reflecting upon such 'failures', I subsequently adapted my technique for further interviews, ensuring that I was prepared beforehand and re-condensing my

interview guides from several embellished pieces of paper into one prompt. Apart from time of day and lack of efficiency / preparation, other influences upon the interviews were the location and the medium they were conducted in. The location of an interview can affect its process and outcome (Hammersley and Atkinson 2007). Whilst participants were given the choice of setting, two interviews proved to be significantly influenced by their environment. The interview conducted within a coffee shop proved to be easy to conduct due to the relaxed and naturally 'sociable' atmosphere, but the hardest to transcribe due to background noise⁴⁰. In contrast, one interview with a patient took place within a private seminar room on hospital premises. However, despite the ease of transcribing due to lack of background noise, this interview proved difficult to conduct due to the emotional impact of the hospital surroundings.

One thing I hadn't even considered was the idea that the letter which invited participation is franked by the hospital, so it looks like an appointment letter. The invite itself caused distress to the patient who wanted to burn it. She discussed the idea of being interviewed with her family, and didn't initially want to be involved as she wishes to stay away from dentistry as much as possible. Eventually, she agreed because a relative saw this as an opportunity to express her side of things...Although she felt ill and apprehensive coming to the hospital (something I had tried to mitigate for by offering interviews at their home) she wished not to 'bring it' [dentistry] into her personal space- to contaminate her home with thoughts about dentistry. I hadn't considered this as a possibility. I had thought that speaking on a safe ground would be good, but maybe I should have offered a neutral space- neither theirs nor here? ... She seemed willing enough to express her views, and I thought the interview went quite well, other than the mild discomfort about the room- not very 'friendly'. I tried to make sure that she left with no doubt about my gratitude for her participation- I repeated several times how 'useful' her views were.
[Extract from field journal 26.06.09]

Both interviews affected my ability to conduct research rather than the participants' to participate. At the time I suspected the coffee shop interview would be difficult to

⁴⁰ Whilst providing a 'safe' location, public spaces reduce control of the environment. At the start of the interview, held mid-morning on a Tuesday, the coffee shop was quiet and empty. Within five minutes of starting, the staff had decided to put on some fairly loud background music, and a family with talkative young children sat at a nearby table and began to noisily play Connect-4.

transcribe, and was therefore distracted both by the actual influence of the music on my ability to listen well and also my worries about how the recording would turn out. Although the second interview actually seemed to proceed well in terms of data, the obvious distress the invite had caused inevitably affected my orientation towards her, implied by my profuse and obsequious gratitude at the end. In addition to the location, some interviews with SCDPs were conducted via teleconference facilities. Shuy (2002) notes that some of the disadvantages of telephone interviews are that they are less 'natural'; may encourage undeveloped answers; tire participants; create hearing barriers; and prevent thoughtful responses due to the interview pace. Stephens (2007) adds the problems of interruption, lack of visual communication, articulation, holding the phone, and controlling the environment. Most of these problems were overcome by the visual component of teleconferencing and the protected location of such facilities, however this partial presence *did* change the conduct of the interviews as there was a slight transmission delay. Rather than speeding up the interview pace, it disciplined both my participants and I by preventing immediate interjection, ensuring we both allowed the other to explore their thoughts and finish their responses.

3.6 Clinician-Researcher Role and Identity

The researcher's involvement as a 'research instrument' calls into question notions of identity and role, particularly if participants know that they are also health professionals or if they know them as peers (Mays and Pope 1995; Platt 1981). Within this study, the complexities of the researcher-researched relationship due to my dual role led to problems of confusion and deceit.

3.6.1 Interviewing Peers

Interviewing literature generally assumes that the interview is a discreet event isolated from general life. The researcher and participants are assumed to be strangers, who meet only once, and therefore the interview is without either relational context or consequence (Platt 1981). However, interviewing colleagues is *not* isolated from either previous or future interaction and therefore affects the manner in which interviews are conducted. Platt (1981) notes that shared knowledge and language risks an assumption of similar perspectives, as well as socially awkward situations where both parties 'know' that the answer to the question is already known. Such situations lead to prolonged and apologetic preambles, role playing and general embarrassment as if a social *faux pas* has been made. As someone with similar 'contributory expertise' (Collins and Evans 2007)⁴¹ to the dental participants, both the risk of assumption and an awkwardness were occasionally present in my interviews.

I just interviewed SCDP1. It was a strange experience, and we both seemed a bit embarrassed to function at that level. Sometimes stories came out and I wondered if they were about me. The interview was in the special care room, and right at the beginning we were interrupted. At the end [another clinician] asked if SCDP1 had "passed"... Now I'm worried that they'll tell the other what I asked about and 'cultural stories' will be propagated.

[Extract from field journal 12.05.08]

This interview was the first one conducted with a member of staff from a SCSC. Reflecting upon this interview, I subsequently adjusted my preamble by emphasising my assumed ignorance. By highlighting my role as a novice social scientist, I created a 'we' where both interviewer and interviewee overtly acknowledged the upcoming strangeness as a temporary role borrowed from a strange profession (sociology), rather than an inherent challenge to my identity as a colleague with expertise. Hammersley and Atkinson (1995) note that *'it may not be*

⁴¹ That is, having both the language and practise to be able to contribute to the field.

possible to take on a novice role' (p. 82). Despite starting each interview by saying that I wanted participants to assume I had amnesia and that I was researching as a social scientist, once the interview was underway answers to questions with sedation staff were often preceded with comments like "well as you know...". The 'ordinariness' of knowledge was assumed by participants, rather than the uniqueness of personal interpretation, and meant that some information became skipped over as basic information which might not have been if I had been a genuinely naïve outsider who may have been more patiently explained to. Whilst these assumptions can be seen as conversational reparative acts to mask participants' embarrassment at explaining something normally taken for granted, its effect was to gloss over an assumed tacit knowledge and therefore required challenging. Such challenges could only happen so many times before I felt I risked alienating my participants (Platt 1981). In addition to demonstrating a confusing 'ignorance', interviewing peers about practices challenges their assumed 'norms', rendering differences in action and belief visible and making participants vulnerable. Whilst participants might generally be concerned with confidentiality, by talking to a peer vulnerability is intensified because they are disclosing to someone who has the potential to make informed judgements about their disclosures or connect with another peer and 'blow the whistle' on them, thereby affecting their relations with colleagues (Platt 1981). This potential vulnerability was frequently acknowledged by participants.

I just interviewed SCDP11. Despite my assurances of anonymity and confidentiality, there was still a residual suspicion of their potential safety. Referring to a colleague they decided "I won't mention any names", despite my clear example that I was willing to discuss colleagues' public stances⁴². After the digital recorder was turned off they started to give their opinion of the DSTG, stopping with "you're not recording any more are you?" and then carrying on when I said I wasn't.
[Extract from field journal 13.01.10]

⁴² Not confidential interviews, but public positions such as those expressed in the literature or at conferences.

The use of such 'off-the-record' data is an ethical dilemma regarding consent. Reflecting upon the incident, I decided that although I would not use the data as part of my coding (it was absent from the transcript), I could not forget the data or pretend it had not been said, and so used it as a sensitising concept for future interviews to confirm or rebut.

3.6.2 Interviewing Patients

Although on reflection it seems obvious, at the start of the research I did not anticipate that I might be used as a source of dental knowledge by patient participants. I *had* expected that being a qualified dentist would affect the role I had with dental patients, but more because I embodied the profession they were estranged from. In contrast to my expectations, my actual dental role did not appear to affect participants negatively and instead I was seen as an on-hand expert.

At the start of all interviews I orientated myself to participants by a short biography explaining my interest in them. Early research interview participants were informed I was dentally qualified, however this led to some ethical problems. Like Atkinson (1997) '*I [also] found it necessary to manage the contrasting impressions of expertise and ignorance*' (p. 65), as participants would seek to find out my dental opinion or to explain treatment. In one interview the participant had not yet received treatment, but had been treatment planned and had given consent for a particular sedation modality. Having asked them to discuss the pros and cons of different sedatives using prompts and descriptions, they consequently changed their mind about the treatment they wanted, and tried to use the interview as a dental consultation. I subsequently decided that I would omit the information that I was a dentist, and instead play on my status as a postgraduate student eager to

understand their views. Whilst this was generally successful, I still found myself caught in a dilemma of disclosure at times, which I did not always handle well.

I just lied. Before, I've been economical with the truth [by avoiding disclosing my dental identity], but I just bare-faced lied about being a dentist. I had a patient ring to agree to participate in the study, and as part of the chat he said "I wanted to talk to you about the other teeth I have in my head". I don't want to get embroiled in a dental consultation, I want them to think I am also an 'other' looking into this world called sedation- partly to get my research data, and partly to keep power dynamics clean. I said "I wouldn't be able to give advice about that I'm afraid, I'm a sociologist NOT A DENTIST". Is it unethical to pretend I am not something I am?

[Extract from field journal 03.06.09]

Again I ducked out of dental identification and misled him into thinking I am not a dentist. This time I did it to avoid the subject changing focus, however I wonder if there is an ethical imperative for me here. I am benefiting from him talking to me, yet I am withholding my ability to benefit him dentally. Twice I've lied / misled patient participants to prevent dental questions. But shouldn't I be prepared to do that as a form of reciprocity?

[Extract from field journal 05.06.09]

Both occasions were clearly times of deceit, however where disclosure was not verbally avoided, my role still raised potential ethical dilemmas.

I had an interview with a patient today. In order to minimise my dental presence I took a change of clothes in to work. So my clinician self wore a shirt and tie this morning, then I changed at lunchtime into jeans, a tee-shirt and cardigan and my scuffed brown shoes. With my in-need-of-a-cut Barnet I think I looked every part the student. I realised during the interview though that the participant didn't think I was a dentist at all. He kept referring to 'them' and speculating about me having a dentist. So whilst I meant to reduce my threat I've actually re-presented myself completely. I suppose that's ok unless he comes back. How do we interact when he sees me in my professional gear even if I don't treat him? Will he feel lied to? Misled? How does that affect the trust which he thought was so important to the process of sedation provision?

[Extract from field journal 14.02.09]

As mentioned previously, such 'role conflict' (Stryker and Macke 1978) is an emotional risk of qualitative research (Bloor *et al.* 2007, 2010). Punch (1994) and Hammersley and Atkinson (2007) are pragmatic about deception though, as passive or active deception is part of everyday social interaction, and enables responses not otherwise obtainable. Usually for researchers, some level of deception is deemed

acceptable as '*a matter of self-conscious impression management*' (Hammersley and Atkinson 2007, p72).

3.6.3 Impression Management

As well as role definition, in order to facilitate approval and build rapport, messages have to be communicated to the participants about acceptability. For this reason the issue of 'impression management' is of high significance to qualitative research (Bryman 2008; Delamont 2002; Hammersley and Atkinson 2007). In order to appear credible as a researcher, a certain amount of 'stage management' is required (Goffman 1959 [1990]) to enable belief in the role. Discussing medical sociologists, Straus (1957) notes that such researchers should, like chameleons, retain a basic personal integrity and identification whilst adapting to the expectations and requirements of the environment they find themselves in. This is true for physical appearance as well as professional interaction. Self-presentation is most dramatically managed by attention to dress, since attire (as noted earlier) has a significant influence on others' perceptions. Looking the part requires thought about what 'role' the researcher is playing. Whilst researching a school, Delamont (2002) adapted to her participants by wearing

'a coat and matching dress, the coat well down below the knee for meeting the heads of schools, the dress well up the thigh for meeting the pupils. Heads saw a respectable coat (and real leather gloves), the girls saw a miniskirt' (p. 101).

My research involved several people groups- patients, general dental practitioners, university hospital dentists and university hospital nurses. Hammersley and Atkinson (1995) suggest that interviewers should make '*careful self-presentation to avoid the attribution of damaging identities and to encourage ones that might facilitate rapport*' (p. 141). Each group required a different 'costume' to build rapport,

and to downplay certain alternative identities. Whilst I did not make huge changes to my wardrobe, I did alter my *'appearance and habits a little in order to reduce any sharp differences'* (p. 67).

For patient interviews I dressed very casually, usually in jeans and a tee-shirt, so that my informality would help put them at ease and make my 'student' role credible. Given the nature of the relationship between anxious patients and dentists I was keen to downplay any whiff of being 'dental' I might have, and instead played on my role as a 'postgraduate student' co-supervised by the School of Social Sciences.

PCDPs would have been more accepting of a shirt and tie, but the majority of dentists also dress semi-informally, wearing the iconic dental smock or polo shirts. There is sometimes a sense of 'ivory tower versus the "real world" coal face' operating in the relationship between academic dentists and PCDPs, and my role in these interviews was as 'one of them', attempting to minimise my 'hospital' identity. Having been in general practice until starting the research I dressed semi-casually as I would have had I been working in practice, often in a polo shirt.

Interviewing colleagues from the dental hospital required managing my image in the other direction and downplaying my 'social scientist' self. Qualitative research and social science were not understood and thought to be a bit soft⁴³, so I needed to maximise my appearance as someone who did things 'properly'. As such I tended to dress in a shirt and tie. I reasoned that this would give off the air of 'professional', which would mean my research was taken seriously and would also make it easier for me to look around clinical areas. This image was modified slightly for interviews with nurses, where I wanted to break down any dentist-nurse power imbalance and

⁴³ As an example, I was introduced by a colleague to postgraduate course participants I was teaching on as "Steve's a social scientist, but don't let that put you off. We'll forgive him (laugh)."

relate as a peer, though whether removing my tie and undoing my top button is a facetious way of achieving this I am not sure.

3.7 Ethics

This difficulty of managing my image whilst avoiding deceit was just one of the ethical considerations during the process of this research. Denzin (1989) identifies four areas of ethical consideration during research: the organisational “situated interpretation” research is working within (i.e. the organisational structure, guidelines, and assumed agendas); the social context of the participants (i.e. their relationship with the researcher; the research context and participants’ attempts at self presentation); researchers’ social and political pressures (i.e. the prevailing hegemonies of dental versus sociological research, academic pressures, policies, relationships with colleagues); and the researchers’ values and ethical stance (i.e. accountability, the consequences and implications of research and publication, their relationship with participants). As previously noted, the context of the research, my relationship with my colleagues and self presentation were significant in this study. During the research, three ethical considerations were particularly pertinent to my relationship with participants- the issue of power, the validity of consent and the importance of confidentiality.

3.7.1 Power

Power dynamics are present in all interactions, but may become distorted in interviews because of participants’ different roles and the subjection of participants to the researcher’s “gaze” (Foucault 1963 [2003]; Nunkoosing 2005). This is especially so where participants have little power or control (Hammersley and Atkinson 2007), a situation which may be present for anxious patients who in

contrast to a consumer or stakeholder of private sedation services, may feel that they are recipients of a limited service and at the mercy of those controlling it. Power was also significant because of the emotive nature of the subject matter which involved an *'intrusive threat'* to a *'private, stressful or sacred'* area of the participant's life (Lee 1993, p. 4). Such 'sensitive research' can have a significant impact on participants, and as described earlier one participant was severely affected by attending the dental hospital for an interview.

I came for this interview here [the hospital] because I didn't want it [Dentistry] to invade my home. I'd rather speak here. When I come here I say goodbye to my house, my cats and everything because I don't think I'm coming back. I go into a different mode. It is very difficult to explain – even this morning – I forget things, go back for things, its like an overwhelming feeling, not be able to go home – even though my husband said "I'm sure the chap's not going to do anything" – so anyway, I eventually came. [Eve 24/06/2009]

Although interviewing phobic patients about dentistry may be extremely stressful for them, bringing things under scrutiny which might have been more comfortably ignored also has the potential to be cathartic and empowering (Brannen 1988; Miller and Glassner 2004), and indeed the recognition of this opportunity was frequently expressed at the end of the interview after recording was stopped.

3.7.2 Consent

Whilst the consent process provides participants with a clear understanding of the nature of the study to enable informed consent, it may also constrain participants' thinking and answers by defining their perception of the study's purpose (Hammersley and Atkinson 2007; Morse 2008). Morse (2008) questions whether vague, more encompassing titles should be used, with post-interview debriefs given afterwards instead. This influence of the consent form on the research, as well as the evolving nature of qualitative research, calls the validity of fully informed consent

into question (BSA 2002; Punch 1986). This project balanced thoughts about constraint and validity with the pragmatic acknowledgement that consent was a necessary part of ethical approval. As described earlier, participants were provided with an information leaflet enclosed with the invitation letter (Appendix 4). This explained *'in meaningful terms to the participants'* (BSA 2002; COREC 2008) the general purpose / aims, process (who and how), funding, pros and cons of participating, and intended use of results, but did not go into further details about the precise 'foreshadowed' focus of the research.

3.7.3 Confidentiality

The personal nature of qualitative research means that researchers are privy to confidences and learn personal details about participants which they may not wish to be shared publicly (Gobo 2008). Researchers are placed in a position of trust, and in order to preserve that trust from an ethical as well as pragmatic point of view it is routine practice to anonymise data and ensure confidentiality.

Following interviews, digital audio files were transferred from the recorder leaving it blank. All digital data (mp3 recordings, transcripts and CAQDAS⁴⁴ entries) were kept upon secure PCs (one on Cardiff University premises, one laptop) which were accessible only by password or biometrics. All personal information within the data were anonymised by assigning participants pseudonyms or codes (i.e. SCDP2). Writing about pseudonyms (but applicable to codes), Delamont (2002) asserts that such designations should *'protect the identity of your informants from outsiders for ever'* (p. 203). Patients have been given the top baby names of 2007 according to the Office of National Statistics⁴⁵, whilst referrers and SCDPs have been assigned

⁴⁴ Computer Aided Qualitative Data Analysis Software.

⁴⁵ See http://www.statistics.gov.uk/downloads/theme_population/2007-Boys-Ranking.xls and http://www.statistics.gov.uk/downloads/theme_population/2007-Girls-Ranking.xls

signifying codes. Some settings are difficult to disguise, so that participants given pseudonyms are identifiable by other participants (Green and Thorogood 2009). Indeed even larger research sites like towns can be recognised (Gobo 2008). Atkinson's (2006) reflection on his study of the Welsh National Opera company illustrates that on some occasions pseudonyms are unworkable, though he concludes that in his particular study it was unnecessary as there was '*nothing scandalous*' (p. xii) in his ethnography. Whilst codes sanitise data and remove an aspect of the humanity of participants for the reader, sometimes they are required where small populations render anonymity via pseudonym impossible, yet anonymity is still desirable (Salisbury 1994). In addition to changing identities, data have been omitted where they might lead to identification.

Participants may have misgivings about the true nature of research, the confidentiality of their answers, and their representation in the final results (Bryman 2008; Hammersley and Atkinson 2007). As discussed in the section on peer participants, despite my reassurances of anonymity and confidentiality, some SCDPs were still nervous that they would be betrayed, and that views outside of the "party line" would get back to colleagues.

- (SW) *Could you do me a favour, do you know where that opinion is published?*
- (I) *Yes I think that it is in a XXXX article and it's XXXX but I don't want that quoted from me.⁴⁶ [SCDP13]*
- (I) *...and that is not the official line of the DSTG.*
- (SW) *No. So you are a secret rebel really aren't you?...I promise I won't tell.*
- (I) *Yes, you better not! [SCDP7]*

⁴⁶ The exact content of this quote has been redacted in accordance with the participant's wishes.

In keeping with my assurances, no participant-identifying information has been used in at any stage of the study once data were transcribed. All discussions with supervisors, submissions and presentations used data in anonymous form.

3.8 Analysis

In contrast to quantitative research, which undertakes tasks in series⁴⁷ so that analysis is divorced from data collection, in qualitative research analysis permeates the entire process. Each part of the study interacts so that analysis is reflexive-informing, and informed by, data collection and writing (Bryman 2008; Charmaz 2005; Coffey and Atkinson 1996; Flick 2006) (Figure 3.2).

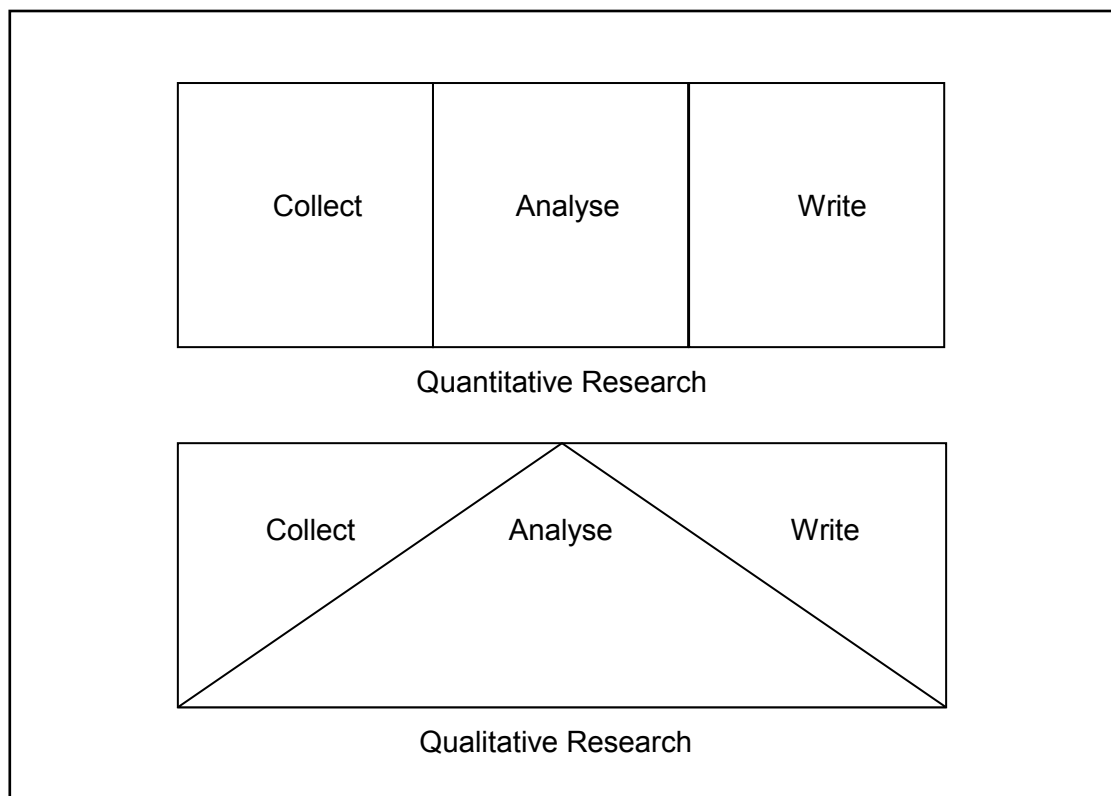


Figure 3.2 Models of the research process (adapted from Mays and Pope (1995))

⁴⁷ This is of course a caricature of quantitative methods.

Interviews were transcribed verbatim from digital recordings. In doing so I was aware that I had to decide the level of sensitivity I would apply, as transcription adds a gloss to real talk. By being rendered readable, the idiosyncrasies of talk are removed (Prior 2007). As I was not applying a conversational or discourse analysis method, micro-pauses and ‘fillers’⁴⁸ were not included unless they seemed relevant to the context of the answer. The first ten interviews were transcribed by me, in order to immerse myself in the data and develop my initial analytical mindset. As the research developed, transcription was provided by a colleague using an agreed form of layout and sensitivity to paralanguage. I then read all transcripts through concurrently with their corresponding audio file to check for accuracy and level of sensitivity.

3.8.1 Grounded Theory

Originally developed by Glaser and Strauss (1967), Grounded Theory is a systematic approach to analysis which aims to generate themes and theory out of research data (Bryman 2008; Coffey and Atkinson 1996; Strauss and Corbin 1998). It is the most common qualitative research method used or cited within healthcare settings (Cohen and Crabtree 2006; Shin *et al.* 2009; Silverman 2005), and has previously been a useful approach to examine aspects of dentistry (Abrahamsson *et al.* 2001, 2003; Abrahamsson *et al.* 2002a; Abrahamsson *et al.* 2002b; Gibson 1997). It seeks to uncover ‘*basic social processes*’ (Glaser 1978, p. 94) - processes which operate during social interactions. To do this, detailed descriptive data are coded for activity (e.g. ‘metaphorically biting your tongue’), the properties of which are explored, and the conditions, context, strategies of management and consequences analysed. Through a comparison of codes, concepts are identified (e.g. ‘treating flexibly’) and through further comparison and integration, categories

⁴⁸ By fillers I mean verbal utterances that express or seek understanding, such as “uh-hmm” and “you know”.

developed (e.g. 'performing treatment'). Comparison between codes and further data, other codes, or categories leads to more consolidated categories and guides enquiry. The analysis is therefore a constant comparative method, flip-flopping backwards and forwards between each aspect and gradually building a framework. Data are collected until no new developments are gained from new data (theoretical saturation) (Strauss and Corbin 1998) (Figure 3.3). The relationship between categories allows a hypothesis to be constructed which can inform a local 'substantive' theory. Further exploration in different settings can subsequently apply this substantive theory and develop a more abstract 'formal' theory (Bryman 2008; Strauss and Corbin 1998). As a research pathway which moves from the most local to the most abstract, grounded theory is flexible in the level of application to which it can be developed and is only limited by the researcher's aims.

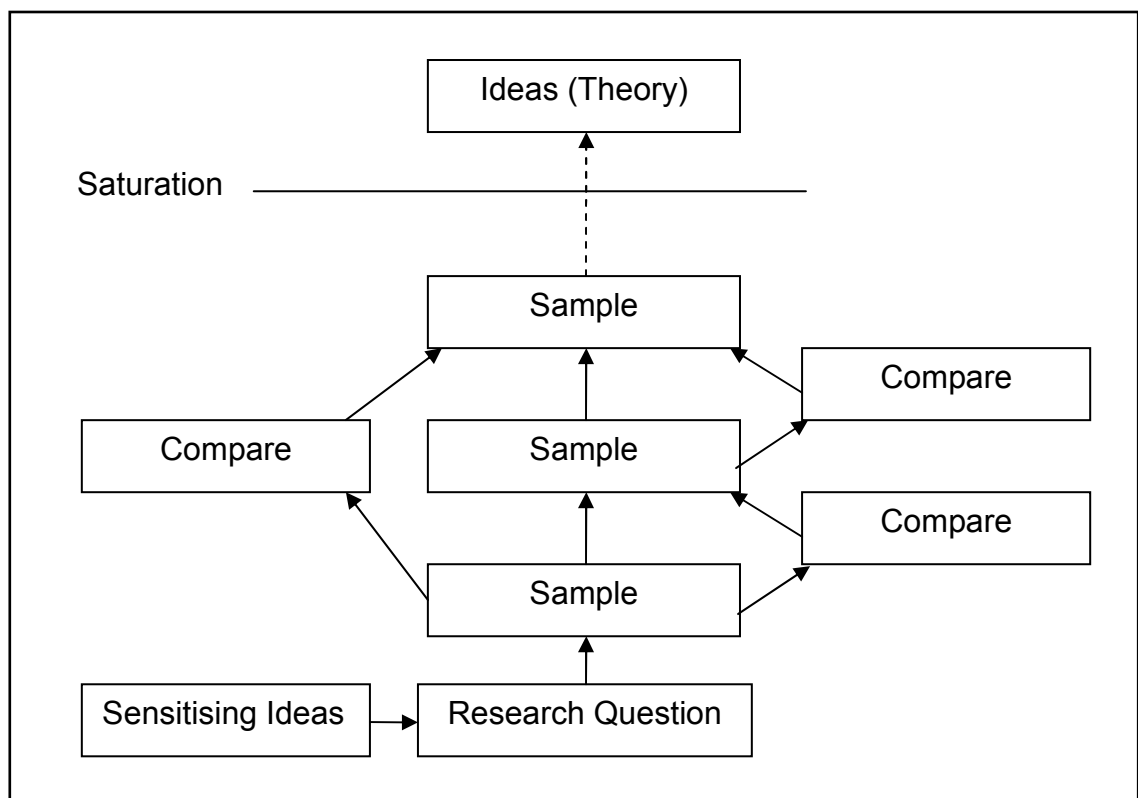


Figure 3.3 The grounded theory process

In a thirty year retrospective review, Melia (1996) noted that often 'Grounded Theory' had been synonymous with guidelines developed by Strauss and Corbin (1990). Indeed, in Cohen and Crabtree's (2006) review of methodological textbooks a decade later, Strauss and Corbin (1998) was one of the most cited texts, second only to (Glaser and Strauss 1967). Despite this, approaches to grounded theory have diverged and developed since its initial development so that a variety of forms now exist (Bryant and Charmaz 2007; Morse *et al.* 2009). Whilst helpful as guides for researchers to follow, Glaser (1992) has warned that such approaches risk '*piling up tons of fractured rules*' (p. 2). Other researchers have subsequently sought to remove the mystique around Grounded Theory, describing it as simply '*a way of having ideas on the basis of empirical research*' (Atkinson *et al.* 2003, p. 150) and recommending that such approaches to data be used as a guide rather than a 'cookbook' prescription (Dey 2007).

Within this research, I sought to follow the principles of grounded theory analysis outlined by Strauss and Corbin (1998), yet mindful of the advice to use such methods flexibly rather than as '*a kind of procedural orthodoxy*' (Atkinson *et al.* 2003, p. 148). This approach is compatible with Flick's (2006) characterisation of qualitative research as being concerned with prioritising the research issue over specific methods, a focus on the research process and orientation, and an attitude within the researcher of curiosity, openness, and flexibility in using methods. In addition, I used some of the mapping tools developed by Clarke for 'Situational Analysis' (Clarke 2003, 2005, 2009; Clarke and Friese 2007), a 'second generation' grounded theory (Morse *et al.* 2009) which examines '*[t]he situation per se [as] the ultimate unit of analysis*' (Clarke 2005, p. xxii) .

3.8.2 Coding and Memoing

Analysis involves closely attending to the data, allotting codes to units of data and recording thoughts about the data in theoretical memos. This dual process of coding and memoing enables exploration of the data and expansion of ideas regarding them (Bryman 2008; Charmaz 2006; Strauss and Corbin 1998). Coding involves closely reading the transcript, interpreting the data, labelling and finally organising it (Charmaz 2006). Coffey and Atkinson (1996) outline three types of code: open, axial and selective codes. Along similar lines, though with different foci, Charmaz (2006) uses initial, focussed and axial coding⁴⁹. Open / initial coding is the primary analytic move with the data. Data were examined out of context (line-by-line, as paragraphs and as whole answers), and given descriptive labels (codes) which summarised them. Open coding created huge numbers of codes (110 in the first interview). Such codes are linked and integrated into more abstract concepts by looking at contexts and consequences, properties and dimensions (Strauss and Corbin 1998). Although managed within NVivo 8 computer aided qualitative data analysis software (QSR International, 2008), an example is given of a section of data (Figure 3.4)⁵⁰.

⁴⁹ Whilst described linearly, each type of code was used throughout the project's history (although open coding was more predominant initially and selective coding towards the end of the project).

⁵⁰ This example is in some ways 'cleaned up', as sections of data can have multiple codes applied to them which would render the example confusing.

Excerpt from Transcript	Codes
<p><i>I think somebody in Perio should have driven up to that rather than pursuing some bloody silly treatment plan that came from a dental text book. I mean we do a lot of treatment, we do do things that perhaps are not in textbooks, you know we make it up as we go along to suit that patient. We patch fillings, we do all manner of stuff that we feel is appropriate for that patient. We are treating the patient not the tooth. All dental courses talk about the importance of treating the patient, and then the next thing they are talking about cavo-surface line angles! I would rather have second rate dentistry but a patient who wants to come back, than first rate dentistry and a patient so anxious that they never want to be seen by a dentist again. [SCDP13]</i></p>	<p>Taking responsibility to go 'off plan'</p> <p>Following textbooks</p> <p>Going off-canon</p> <p>Making things up</p> <p>Treating to suit the patient</p> <p>Patching up</p> <p>Patient-appropriate treatment</p> <p>Treating the patient holistically</p> <p>Using cliché (pt not tooth)</p> <p>Paying lip-service to PCD</p> <p>Losing perspective to technique</p> <p>Compromising dentistry for patient acceptance (first rate care, second rate dentistry)</p> <p>Compromising patient acceptance for dentistry (first rate dentistry, second rate care)</p>

Figure 3.4 Example of open coding

Axial coding looks at relationships between categories to reassemble the data at a more abstract level, building around central (axial) categories. Focussed / selective coding is the process of narrowing down the focus of the research by using codes which are the most useful, common or significant to describe the data. Subsequent data are coded using these and the 'core category' (Strauss and Corbin 1998) is embellished, explored and developed.

I open coded my data, and consolidated codes as different facets of key concepts (e.g. "being patient" and "keeping it inside" were consolidated as facets of "managing emotion"). As the project progressed, I selectively coded the data ignoring some stories and following one that seemed most commonly and clearly expressed⁵¹. Interpretation of events is taken from a particular perspective or horizon (Gadamer 1975 [2004]). Gadamer argued that whilst orientated by our

⁵¹ I.e. I could for example have explored the educational aspect of the sedation clinic, or the information management of participants, but instead followed the trajectory of the clinic.

history, we are also confined by it. Coding is therefore guided by personal perspective- we 'see' what we are orientated to see. To avoid prejudice, a reflexive approach was taken towards reading data which exposed *a priori* categories informed by my experience, training and literature review. These categories were not ignored, but had to 'earn' their place in the analysis through empirical evidence. This awareness of bias allowed a distance to develop from the text within which other codes could appear.

Analysis is the establishing and thinking about linkages between codes (Coffey and Atkinson 1996). In addition to coding, I wrote memos throughout the project elaborating my thoughts around codes and concepts. The following is an excerpt from a memo written about the 'hidden agenda' of rehabilitation from sedation dependency:

Name: Weaning

[SCDP11] and [SCDP10] both discuss the purpose of sedation as allowing initial access, but with the explicit purpose of weaning patients off sedation until they can be returned to general practice no longer requiring sedation. How do they get weaned? [SCDP11] thinks NOS can be turned down, [SCDP10] thinks referral is for IV really. Does anybody explicitly wean? How does it work with other drugs like Methadone?

These memos helped me to see facets to explore, literature to read and relationships to understand and develop. This particular excerpt shows avenues of exploration of practice (how they are weaned), comparison of opinion, and literature to explore / comparisons with other areas (heroin treatment). Such analysis is messy and uncertain, and involves a process of disaggregating before re-condensing into a cleaner (less scary) whole. By thinking about the data in an abstracted form, analysis is able to move from a localised and substantive context to a more general theory (Glaser and Strauss 1967).

3.8.3 Mapping Situations

In addition to 'traditional' methods of analysis, I adopted the cartographic tools of Clarke's Situational Analysis (2003, 2005, 2009). Graphic representations are helpful for thinking about data (Atkinson *et al.* 2003), and to aid such analysis Clarke (2005) proposes three types of map- situational maps, social worlds / arenas maps and positional maps.

Situational maps plot elements of the research situation and allow relations between them to be drawn. At the start of the research I 'brainstormed' anything I could think of that was related to sedation provision (Appendix 2). As the project developed, further additions were made to the map from insights and participant information, and relationships between elements considered. In order to aid analysis and highlight neglected areas of concern, the map was tidied and organised into different type of elements.

Social worlds / arenas maps plot the key elements of a situation within the context of social worlds and their arenas of commitment to action and negotiation. Using the situational map helped me understand where I saw the SCSCs in relation to other aspects of dentistry (Appendix 6). Clarke (2005) lists twenty two '*sensitising concepts*' (p. 112) of Social World theory and a list of typical questions to answer in a memo about each social world. Considering some of these suggestions helped me to understand the technology of sedation and the work undertaken within SCSCs.

Positional maps highlight discursive positions taken by participants on issues of concern (see Chapter 7 p. 226). As the research progressed, I explored concepts of

interest by plotting those that were present in interview responses. By doing so, areas of purposive sampling were highlighted by missing positional data.

3.8.4 Computer Aided Analysis

Computer Aided Qualitative Data Analysis Software (CAQDAS) was used to manage data in this project. Unlike quantitative statistical analysis software, there is no industry leader (Bryman 2008). Following training, I used QSR International's NVivo 8 to store transcript and audio data and for coding as this was easily available on University servers, and my supervisors had experience using previous versions. NVivo 8 allows researchers to create nodes (codes) as either stand alone (free) or within families (trees). Such features allow researchers to consider connections between codes (Bryman 2008). For example, the open coded section illustrated earlier (Figure 3.4) became embedded in a coding tree of Flexibility > Procedural flexibility > flexible dental treatment (Figure 3.5).

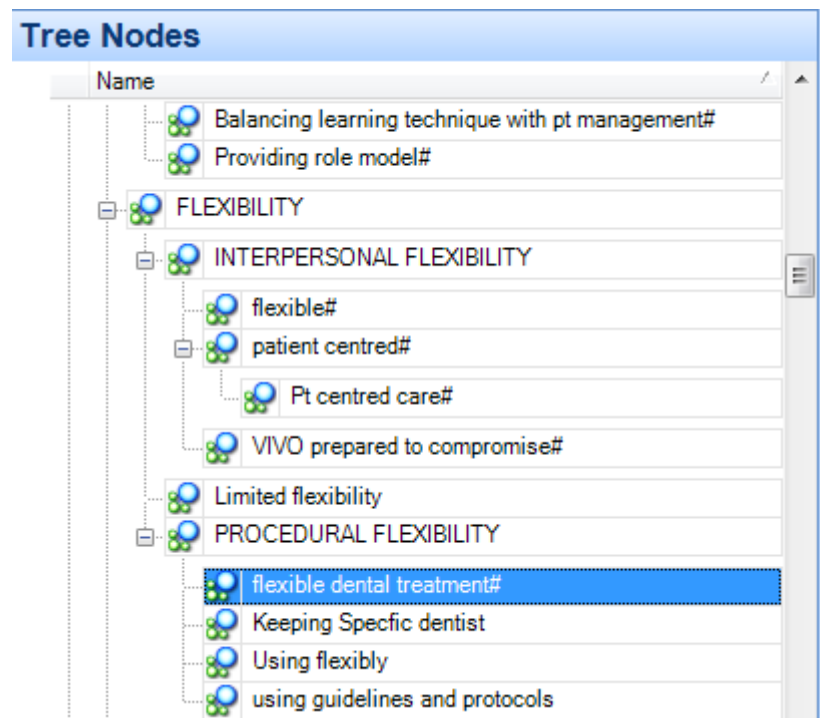


Figure 3.5 Section of NVivo 'Flexibility' tree nodes.

There is some concern that digital data coding affects the coding process (Atkinson *et al.* 2003), and early in the project I found myself overwhelmed by codes for practically every syllable. The relationship between researcher and data should be augmented by analysis software rather than dictated by it (Coffey and Atkinson 1996), so like Bryman (2008) I moved “low-tech” for a while. Having printed out transcripts, I coded them with a variety of coloured pens, before returning to NVivo when I had developed a more practiced eye for coding. Although such an approach created extra work⁵², this flip-flopping between technology can help both the analytic and writing process (Green and Thorogood 2009).

3.9 The Writing Process

‘[A]nalysis is about the representation or reconstruction of social phenomena’ (Coffey and Atkinson 1996, p. 108). For that reason, the writing process- the representation or re-presentation of qualitative research, is part of the analysis (Green and Thorogood 2009; Mays and Pope 1995). The writing-up of qualitative research is more than a *posteriori* reporting of the analysis undertaken in an “objective” manner after the research has been completed, but is influenced by and influences analytic thinking about the research. Reflecting the qualitative research process as a form of ‘bricolage’ or patchwork (Denzin and Lincoln 2005b), the coagulation of different pieces of written work (thoughts, data, analyses, memos, field notes and reflections) creates a whole with some form of overarching consistency. By writing, connections are made between different parts of the data, analysis and extant literature to create an integrated, sociologically imaginative whole. This constant iterative process of writing, reading and analysis was guided by the maxim *‘don’t get it right, get it written’* (Delamont 2002, p. 202). I had

⁵² Coded printouts required later transfer back into NVivo so that I was ‘double-handling’ initial coding.

constant access to writing materials- a research journal for memos and field notes, my laptop, work PC and most importantly my mobile phone. Many times I found myself lying awake in the early hours of the morning with an analytic thought or action “to do” which I needed to trap somewhere in order not to lose it and to be able to sleep again. The calendar and notes functions of my mobile phone were the most easily accessible place to record such thoughts without disturbing anyone.

Writing for different audiences (e.g. thesis panels, biomedical journals, social science journals) requires various communication styles⁵³ and therefore diverse ways to think about the research (Green and Thorogood 2009). In addition, presenting aspects of the research throughout the project using a range of communication media (poster and PowerPoint presentations at conferences, and dialogue at presentations and University progress vivas) at different levels of detail (project overviews or specific concepts) helped me to think about my data, the connections that existed and the spurious arguments I occasionally followed. This requirement to look at the research through unfamiliar eyes helped me to understand the research and make assorted types of connection as a form of theoretical triangulation (Denzin 1989).

3.10 Conclusions

This chapter has outlined the research path taken to explore the use of sedation in secondary care sedation settings, drawing upon excerpts from my field journal, interview transcripts, and methodological literature. Throughout the process

⁵³ The difference of perspective between audiences requires an ability to translate research sufficiently for the different social worlds to find it acceptable. Such translation requires linguistic flexibility, as well as managing the particular information disclosed, in order to buffer differences between the audiences (Ribeiro 2007a). The risk of interdisciplinary research with social science and dentistry is that instead of each world enriching the other (such as Ross’ call for *‘the dental profession [to] look to the social sciences for help’* (1965, p1110), instead the researcher finds no academic home and falls between two stools (Gibson 2002).

decisions about the research path have been taken bearing in mind the aim of the research, and these have been discussed. The following chapters outline the results of my analysis, illustrated by drawing upon empirical data. In the next chapter I will explore the start of the sedation journey- the perception of sedation and SCSCs, and the reasons for engaging with them.

Chapter Four - Accommodating the Purpose of Sedation

4.1 Introduction

This chapter examines the variety of interpretations participants have of SCSCs and the sedation they employ. As an interface between different worlds interacting around the use of a technology, SCSCs offer an opportunity to explore the interpretation of boundary-spanning social organisations and objects. Previous research has focussed upon the textual nature or extrinsic information carrying properties of 'boundary objects' (Fox 2011; Oswick and Robertson 2009), and the science:policy arena for the boundary organisations which use them (Cash *et al.* 2003; Forsyth 2003; Guston 2001; Huitema and Turnhout 2009; Moore 1996; Tribbia and Moser 2008). This chapter uses both concepts to look at the ways in which participants engage with SCSCs. It explores the embedded meanings of their sedation technology (Fox 2011), and identifies SCSCs as *clinical boundary organisations* due to their role in accommodating the patient:policy and patient:clinician interfaces. Despite such organisations' intermediary role, SCSCs share long-term ideologies with the related social world of PCDPs which lead their members to act in an advocating and hosting role towards visiting patients.

The first section outlines the significance of the frontier between the social worlds that SCSCs contain. After identifying both the presence of a border between dental and lay social worlds, and SCSCs' roles in accommodating this interface, the following two sections examine the functions that participants from different worlds attribute to SCSCs. Whilst these roles vary, as forms of treatment with attendant trajectories they can be classified along a temporal axis. Consequently the second section of the chapter considers the various immediate demands that participants

place upon sedation treatment and explores SCSCs' boundary organisation role, whilst the final section considers the longer-term hidden agenda of 'related' clinicians involved with SCSCs.

4.2 The SCSC Interface

SCSCs are meeting points; sites of interaction between the social world of dentistry and the '*latent sub-world*' (Tovey and Adams 2001, p. 698) of anxious patients. Such social worlds '*intersect...[w]here services are needed, technology is borrowed and technical skills are taught and learned*' (Strauss 1978b, p. 122). These three functions are integral to SCSCs, where patients appropriate sedation performed within an educational setting in order to access dental treatment.

The identification of SCSCs' roles in containing different interacting parties is significant because participants' implicit theories and interpretations of their situation affect the manner in which they act (Clarke 2005; Fox 2011; Strauss 1978a; Thomas and Thomas 1928). The interface between worlds can involve a variety of structures and processes (see Figure 2.2) which can defensively maintain boundaries to keep worlds separated, or openly negotiate and overcome them to allow cooperation (Gieryn 1983; Strauss 1978a, 1993). Illustrating such frontier-adapting structures, the technology of sedation acts as a boundary-spanning 'standardised package' (Fujimura 1988, 1992), and the social-world-containing SCSCs that use it act as 'boundary organisations' (Guston 1999, 2001).

4.2.1 The SCSC Clinical Boundary Organisation

Boundary organisations exist at the frontier between different social worlds, containing the interface within their social organisation in order to facilitate the

worlds' interaction (Cash *et al.* 2003; Guston 1999, 2001; Tribbia and Moser 2008). Whilst traditionally applied to the science:policy boundary, the defining characteristics and identified functions (Cash *et al.* 2003; Tribbia and Moser 2008) can also be identified within SCSCs.

Guston's (1999) analysis of the science:policy interface showed that different parties had goals they were unable to achieve without help. Congress was unable to innovate without scientists, whilst researchers needed to comply with legislation or provide patents and indicators of productivity to justify their work. Through the Office of Technology Transfer, and via the work of the specialists it employed, both worlds' aims were achieved. Likewise, patients, referring dentists, and dental schools all have needs which they are unable to achieve by themselves (see Figure 4.1) which SCSCs are flexible enough to accommodate.

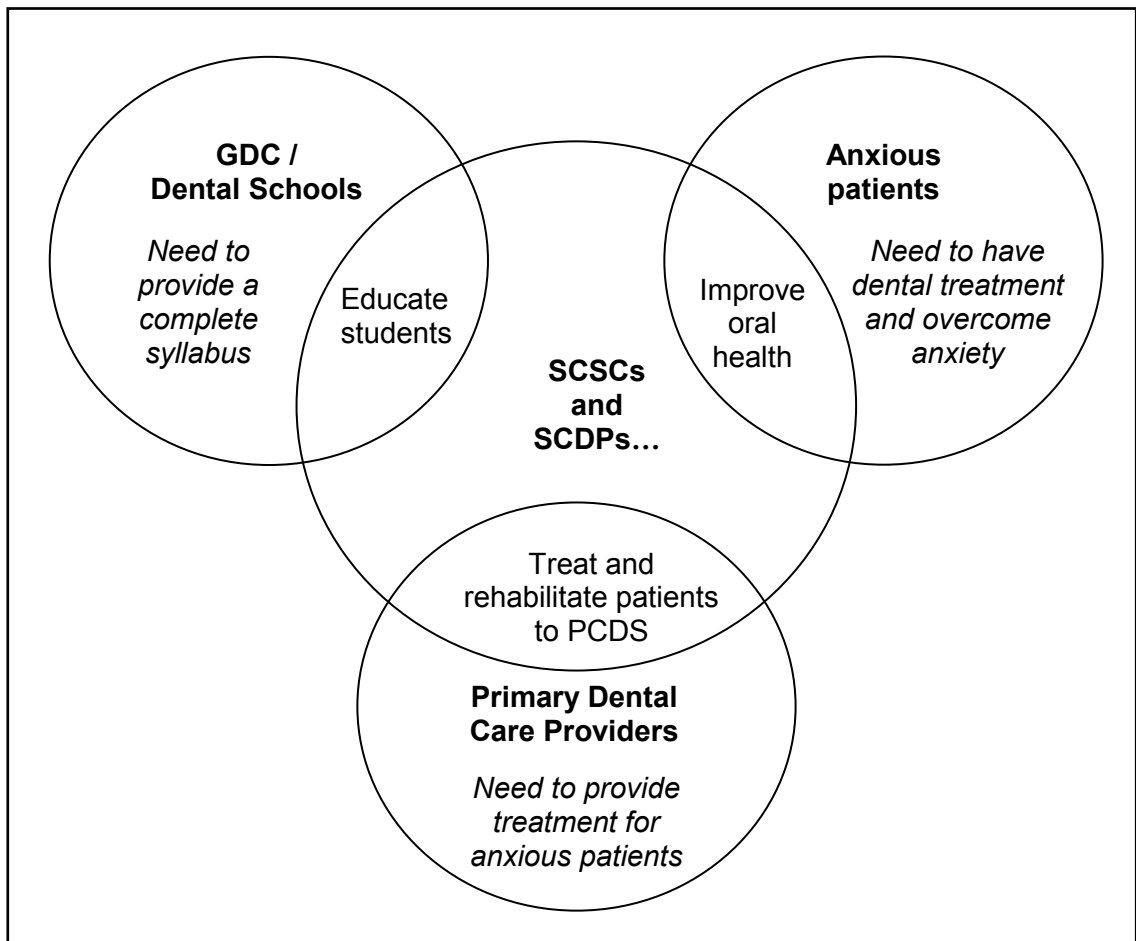


Figure 4.1 The SCSC as a meeting point for different social worlds.

Figure 4.1 illustrates the engagement of different social worlds within SCSCs. Each world is only partially accommodated within the SCSC, as some members of each world will not engage with it. Some PCDPs will not refer patients whilst some patients will not attend SCSCs even if they are referred. Meanwhile other demands of GDC curricula are met elsewhere within dental hospitals (e.g. childrens' dentistry is taught within the paediatric clinic). By engaging with SCSCs, members are able to access a way to meet their particular requirements. SCSCs bring patients face-to-face with dentistry, facilitating this meeting through the technology and processes of sedation provision. By doing so, they make dentistry accessible to formerly avoidant patients and develop previously absent trust. They also provide resources (patients) to enable training, and successful treatment outcomes for referring PCDPs. In order to achieve this mediating function, SCSCs *'provide the opportunity and [incentive]*

for the creation and use of [the sedation]...standardized package' [sic]' (Guston 2001, p. 400).

4.2.2 The Standardised Package of Conscious Sedation

Standardised packages (Fujimura 1988, 1992) are combinations of concrete procedures and abstract underlying theories which direct their use. They are a useful concept for understanding the use of sedation by patients and dental professionals, as their structure allows them to achieve temporarily stable productive work without the requirement for unanimity of interpretation.

The sedation technology used within SCSCs conforms to a United Kingdom definition (DoH 2000; Wylie 1981), and to standards and methods of practice which are taught on undergraduate and postgraduate courses and published within key texts⁵⁴. Although the technical process of sedation technology is standardised, its social interpretation - the reason it is used by individuals, can have a variety of meanings. As a standardised package, sedation can facilitate clinical treatment without a homogenous understanding of its purpose.

4.3 Dealing with the Present

This section explores the short-term aims participants have of engaging with SCSCs- removing patients' anxiety and awareness of treatment and providing students with educational training. The meeting of worlds within SCSCs is primarily to address an immediate need. Whilst, like any 'chronic illness', anxious patients have 'trajectories' which describe their natural history (Thomson *et al.* 2009), the future impact of sedation provision is a secondary issue. First and foremost patients

⁵⁴ See for example (Craig and Skelly 2004; Girdler *et al.* 2009; Meechan *et al.* 1998).

attend SCSCs for help in dealing with their present needs, and by doing so meet the needs of the educational settings they attend.

4.3.1 Removing Anxiety and Allowing Treatment

The main reason for providing sedation to anxious dental patients is to ‘assist them [to] obtain the treatment they require’ (Craig and Skelly 2004, Foreword). SCSCs contain two separate processes related to this aim, which within dentistry are usually conflated⁵⁵. The first is the purpose of the sedation technology they employ; the second is the aim of SCSCs in offering this technology.

4.3.1.1 Providing Anxiolysis

Sedation is a way of meeting patients’ immediate need to overcome their experienced fear.

(SW) If somebody says “you’re going to have sedation”, what goes through your mind, what do you think of?

(G) That’s good! Because I’m not going to be in this terrible state. And frightened, and my heart pounding, so that is good. I suppose it’s the same if you’ve got a head ache. I suffer with migraine and you take two pain killers, and it’s telling you sort of thing “it’ll be better in half an hour, That pain will be easier” So this is what I think. With sedation- “Oh thank God they’re going to do something for me, because if I go to a normal dentist they won’t do that!” [Grace]

[for] lots of very anxious people [you are] able to make a big difference to them very quickly. To make them feel comfortable about what was going on...you can have patients who are obviously very upset: tearful and unable to sit in the dental chair, or behave in any rational fashion towards dental treatment, and they can go from that, to actually having the courage to come in and be sedated and have their treatment done, and at their next appointment thanking you profusely for removing a huge burden from their shoulders. [SCDP2]

The easiest access, the smoothest surgical field to work in...it is really just trying to provide that on somebody who can’t do it for you...To facilitate

⁵⁵ Within Social Science such differentiations between technology and its social environment have been shown to be false. See for example (Clarke and Fujimura 1992a).

providing the care that they are seeking but cannot necessarily cooperate to have done. [SCDP3]

Grace's comparison with painkillers illustrates her view of sedation as a pharmaceutical tool to temporarily relieve the emotionally painful state she finds herself in when having dental treatment. Although she may be distressed beforehand, once it is in her system it will remedy her problem. By removing this 'huge burden' of anxiety, sedation can make a 'big difference' to patients. Whilst clinicians discussed the relief of anxiety in moral terms of removing emotional suffering, as SCDP3 illustrates it is co-productive: sedation also facilitates clinicians' successful completion of their 'job' of addressing dental disease. It prevents a patient perceiving *'that the dentist scars his / her body because this would hinder the flow of their routine procedures'* (Nettleton 1989, p. 1189). Sedation's anxiolytic aim is not only psychosocial, relieving emotional distress for patients, but is also to facilitate technical dental provision for SCDPs. Grace illustrates that the use of sedation is not problem-free. Successfully having dental treatment not only means overcoming anxiety by having sedation, but also involves an earlier obstacle of being able to access it. If *'a normal dentist won't do that'*, then SCSCs provide such access.

4.3.1.2 Providing Access

SCSCs provide *'[s]pecialised medical services and commonplace hospital care'* (DoH 2009, p. 295), that patients can't access elsewhere.

[SCSCs] pick up the pieces that I can't manage. That sounds awful, but they get all the worst bits then, the patients that are difficult to treat, that because of their apprehension about dental treatment may come in with grotty mouths, complicated treatment. I suppose that's ideally how I'd like it to work... I suppose if you are looking at it from a non-dental point of view, it is just like any other specialist clinic, you'd hope to take a group of patients that couldn't be treated in any other way and provide treatment...I suppose you'd probably have to start off with the remit that you are just

*going to be able to provide treatment that can't be provided elsewhere.
[PCDP2]*

[Here patients] get dentistry done that they can't get done elsewhere...my bottom line is that because we are a secondary care service somebody has to treat these patients and I think if we can't, well I don't know who can! So we are a bit of the end stop. [SCDP13]

There was no doubt that there is a demand for the service, on a straight forward NHS service basis the provision of conscious sedation techniques within primary care is relatively poor and there is no doubt there is a massive unmet demand for this kind of service that we offer. [SCDP11]

SCSCs provide treatment for patients who otherwise wouldn't be able to access dental care due to their fear, and whose ability to have sedation in primary care is limited by availability and remuneration (Coulthard 2008; Ferry and Debusse 2008; Hill *et al.* 2008; Wright and Batchelor 2002). Without a means of being encouraged to engage, members of the '*latent sub-world*' (Tovey and Adams 2001, p. 698) of anxious patients do not usually interact with the dental social world as anxiety is associated with dental avoidance (Mejía *et al.* 2010; Nuttall *et al.* 2011). Offering sedation encourages engagement rather than avoidance (Goodwin *et al.* 2012).

I would rather go and catch a train. I've done that before, [caught a train] and gone missing. [Eve]

I would try my best never to go to a dentist prior to sedation. [Olivia]

By mediating anxious patients' experience of dentistry, SCSCs create the possibility for the two worlds to interact, facilitating patients' access to care. Despite sedation's status as a treatment modality which is theoretically available to be provided by PCDPs, there is significant need and demand for secondary care sedation provision (Dentith *et al.* 2010; Goodwin *et al.* 2012; McGoldrick *et al.* 2001; Pretty *et al.* 2011; Woolley 2009). By referring anxious patients to SCSCs, PCDPs that do not provide sedation themselves can still provide access to care for this population group.

The aim of sedation and SCSCs to provide access to dentistry is both a physical one, providing secondary care treatment not available elsewhere, but also a psychological one, offering facilities which remove anxiety and make treatment tolerable. Anxiety is a significant cause of avoidance (Mejía *et al.* 2010), and by bringing patients and dentists together within one setting the separated social worlds are able to interact. However, for patients sedation generally meant more than just removing anxiety to allow this access, it meant removing awareness and active involvement altogether.

4.3.2 Passing Out: Removing Awareness

Whilst all participant groups agreed on sedation and SCSCs' roles in providing access to treatment, different social worlds do not have to share ideologies in order to successfully use technologies (Clarke and Fujimura 1992a; Fujimura 1988, 1992; Star and Greisemer 1989), just have compatible ones (Fox 2011). The use of sedation does not take place in an historical vacuum, but is informed by antecedent events. Prior to its removal from PCDPs' control at the turn of the 21st century following concerns about safety (DoH 2000), DGA was widely available for anxious patients requiring dentistry. The historical provision of DGA continues to influence both patients and clinicians, but for different reasons.

Concern about patient safety which was a significant part of the removal of DGA from dentists' control continues to guide the provision of conscious treatment via sedation. This view is strongly held by SCDPs, and despite the availability of DGA within hospital settings, sedation was still presented as the treatment-of-choice for removing patients' anxiety.

'[The benefit of sedation is] simply that it allows us to do the dental treatment without having something as drastic as a GA done'. [SCDP9].

I was treating some patients under GA and noticed they needed restorative work⁵⁶. When I asked [the hospital management] if there was anything between normal LA and GA I found there wasn't...Either dental treatment would have to be done without anything or completely unconscious with a full general anaesthetic. I realised the enormous number of patients we could help who needed sedation... [Patients] come with ideas about GA and sedation and make assumptions. We explain that "you do remain conscious and do what we want and breathe for yourself. GA is where you are completely unconscious and we control your breathing. Risk from a GA is minimal, but still present so sedation reduces your risk". [SCDP8]

SCDPs seek to steer patients towards safer, less 'drastic' treatment choices with lower physical impact and risk than DGA. Despite the focus of the UK definition of sedation on patients being 'conscious' (Wylie 1981), SCDPs' reported experiences imply that patients still applied attributes of DGA to sedation. Whilst SCDPs spoke about sedation in terms of physical safety, patients primarily discussed it in terms of their emotional safety through a lack of awareness or active participation.

I assumed I'd be sleeping it's as simple as that, I thought I'd be sleeping or appear to be sleeping. I won't see anything hear anything I'll just wake up and it'll be all over.... that sort of lack of participating or knowledge of participating, that did make me feel a lot more easier. [Olivia]

[The PCDP] just said that I was going to be sedated, and I just assumed I was going to be knocked out and they were going to do it that way. I was a bit shocked when I came here first of all...it's just the word "sedation". I can remember my brother when we were younger. He got knocked out to have all his teeth out, so I think I just put two and two together and came up with nothing really! [Ruby]

This confusion about sedation being a form of sleep reflects similar expectations of some participants found by Averley *et al.* (2008) in their study of paediatric sedation. Anxious patients feel an ambivalence between engagement and avoidance (Abrahamsson *et al.* 2002b). Within SCSCs they can reconcile this tension by engaging in an avoidant manner which inverts the 'vicious cycle' of dental anxiety (Armfield *et al.* 2007) (see Figure 2.1) so that avoidant behaviour leads to health improvement rather than deterioration. Whilst sedated dentistry is a conscious

⁵⁶ I.e. fillings and crowns rather than extractions.

process, participants seek to engage on the basis of not knowing or 'participating'. Their talk of sedation in terms of being asleep demonstrates that despite having had the process explained during referral, patients still view it through the lens of DGA. By doing so, they tidy-up the ambivalent liminal status of sedation which is '*betwixt and between*' (Turner 1969 [1995], p. 95) consciousness and unconsciousness. They remove the 'danger' of breached categories⁵⁷ created by such '*matter out of place*' (Douglas 1966 [2002], p. 44), and create social order by relocating sedation within the 'not conscious' category.

Although sedation is a standardised technology with a formalised technique, the underlying beliefs which guide its use differ. Sedation technology has multiple meanings for its users (Clarke and Fujimura 1992b). Patients perceive sedation as a way of accessing treatment without having to come face-to-face with the realities of dentistry, whilst SCDPs perceive it as a safe way of facilitating treatment. Sedation techniques are '*plastic enough to adapt to [the] local needs and constraints of the several parties employing them*' (Star and Greisemer 1989, p. 393), thereby providing a bridge between anxious patients and practising dentists.

4.3.3 Passing On: Providing Educational Training

Whilst SCSCs provide patients with access to dental services, they are also educational sites within University dental hospitals. By accommodating patients' social worlds within university settings SCSCs blur the boundary between patients and the educational world, giving dental students experience of treating anxious patients and training in the sedation process. These functions are a consequence of the GDC's (GDC 2002) guidelines for dental schools' educational curricula, which required graduates to '*have practical experience of...and be familiar with*' (p. 30)

⁵⁷ 'Danger' may seem polemic, but refers to the discomfort we feel when our organisation of the world is threatened by appearing potentially chaotic and unreliable.

conscious sedation procedures obtained through exposure to sedation teaching. The combination of this policy drive following the publication of ACD (DoH 2000) two years previously, and the DSTG's (2000) guidance on the minimum experience expected for 'competent' dental graduates, provided the impetus for sedation provision within the different SCSCs.

The First 5 Years was dictating to the University that the students had to have this activity. And of course at that time, because we are now looking at kind of late 1990's, 2000, there was this panic...within dental schools that they had got to have these students being produced who had done 20 IV cases, 10 RA cases, you know the DSTG document 'The Competent Graduate'. And everyone was running around thinking "how the hell are we going to do this?" [SCDP11]

In addition [to meeting a patient need], the clinic would teach undergraduates as [some schools] had already been pulled up a few times by the GDC for not teaching sedation. [SCDP8]

By meeting this educational requirement, SCSCs demonstrate the dual loyalty of boundary organisations. Reflecting the policy:activity interface of environmental science organisations (Guston 1999, 2001; Huitema and Turnhout 2009; Moore 1996), SCSCs are accountable to both the GDC via their host universities who are unable to train dentists without experience and teaching, and the attending patients who are unable to access acceptable dental care without treating clinicians and sedation technology. SCSCs provide an encompassing environment bringing the two social worlds together, so that each party can achieve their aims through SCDPs' mediation. Whilst many clinics were politically initiated⁵⁸, SCDPs were not cynical about SCSCs' educational agenda but felt that 'real life' exposure to clinical sedation was an important educational tool, providing opportunities for experiential learning as the students:

[Students] see what conscious sedation is first hand, up close and personal. They get to actually do some sedation, so it is not just a question of them watching it happen, you could watch a video couldn't you?, but you won't get the feel for what is actually happening to the patient! So they get that

⁵⁸ Not all SCSCs started after ACD. A few had been in existence before this policy change.

perception of a patient who is coming in, they actually see and can almost smell the fear, coming in and having the treatment done and away they go. And that is a very powerful powerful tool in my opinion- actually to see it and witness it. [SCDP11]

SCDP11's belief in the benefits of SCSCs' experiential training mirrors other authors' descriptions of patients as 'living textbooks' (Atkinson 1976 cited in Strong and Dingwall 2001, p. 107) who are of interest because they illustrate obligatory parts of the curriculum. The SCSCs' dual role of treating patients and thereby providing experience for students reflects historical analyses of medical settings (Foucault 1963 [2003]; Jamous and Peloille 1970). As sites of experiential knowledge, hospital clinics were places to *learn* to treat patients (rather than provide treatment for its own sake). The skills and experience subsequently developed were then to be applied in primary care practices⁵⁹. Although specialist interest groups like the DSTG urge for experience to make graduates proficient, there are myriad demands on curricula to meet GDC requirements, and consequently SCDPs felt that the pragmatic educational aim of the clinic was to provide introductory knowledge.

We are teaching them how sedation works and getting them experience, but we are not making them competent...It is not an objective at all, and I've fallen out greatly with [colleagues] on that – I don't think you can make your undergrads competent at sedation, certainly not with the level of sedation they get here. [SCDP7]

These views reflect a survey of sedation teaching conducted a decade previously (Leitch and Girdler 2000). Recognising that they cannot realistically give sufficient exposure to develop competency and confidence, SCDPs feel that they *can* provide an understanding of the sedation process, and develop holistic clinicians with a bigger picture of how to treat dentally anxious patients.

⁵⁹ The epithet 'primary care' is not part of either Jamous and Peloille's or Foucault's descriptions as such a concept was not in use until 1961 (Donaldson *et al.* 1996).

I think with the undergrads the best thing that they can take away is how to manage an anxious patient – not necessarily by chemical means – but the actual patient management, how to reassure patients and how to make them more accepting towards dentistry – because they are merely going to be beginners when they finish their sedation block anyway. [SCDP9]

[we hope they'll leave with] improved insight into assessing an anxious patient, actually a greater insight into picking up the perception that the patients are anxious because I think that if patients come into a practice, they might not handle a situation correctly and they might lose that patient. So it is actually reading the signals that a patient is really anxious as well. [SCDP12]

The manner in which dentists interact with their patients affects their experiences of dentistry (Abrahamsson *et al.* 2002a; Eli *et al.* 1997), and by training within SCSCs, students are encouraged to develop the knowledge and skills that reassure patients. By teaching students how to detect potential anxiety, and manage it by demonstrating an empathic and reassuring manner, SCDPs aim to teach the emotional labour (Hochschild 1979, 1983) and facework (Giddens 1990; Goffman 1967) which can '*reassure patients and...make them more accepting towards dentistry*' (see Chapter Five).

In addition to providing experience in anxiety management and sedation provision, anxious patients provide illustrative experiences for students' general dental care. Whilst sedation techniques are the main focus of clinical teaching, the consequence of dental avoidance is significant dental disease (Armfield *et al.* 2009), so an adjunctive educational outcome of SCSCs is increased exposure to untreated dental caries.

these patients present with different types of disease... [our students'] actual conservation [filling] experience it is actually quite limited, some of these students are probably seeing their first virgin cavity or big cavity for the first time, they are learning how to manage carious dentine and learning how to manage the approach to the pulp, how do you manage an exposed pulp? You know those kinds of decisions. Yes it is all good stuff for them. [SCDP11]

By providing treatment for patients, SCSCs give students the opportunity to experience anxious patients and untreated disease, rather than the replacement of failed fillings in the institutionalised patients they encounter elsewhere in the hospital. SCSC are sites of multiple skill acquisition, where students develop basic clinical dental competence at the same time as skills in the technical provision of sedation, and '*actions and motives [such as emotional labour] that are...contained in the hidden curriculum*' (Pugsley and McCrorie 2007, p. 317). Despite Foucault's (1963 [2003]) critique of the abusive nature of educational clinics, patients were not concerned about their potential objectification. All were pragmatic in their attitude towards the teaching agenda of a University hospital, but differed on whether this should be practical.

[Students] have to learn! They are going to be dentists, so I don't mind people watching if they're learning. If they are not [qualified] yet, don't touch! Because they can do something and then it's not reversible, that is it! But they can watch all day long. [Oliver]

if they are training, and they've got someone there who is assisting them who knows what they are doing, and if they don't do it right the other one will take over. You can't put them down because they are training, because when I was apprentice, no-one could put you down, and if they did put you down you'd feel that big, you know? They have got to learn somewhere. [Thomas]

Exposure to the dental 'gaze' (Foucault 1963 [2003], 1995; Nettleton 1992) of the students is understood and accepted as part of students' training, and patients acknowledged that students 'have got to learn'. They recognised that by trusting their care to students, they placed themselves in a position of risk that they might not 'do it right', and whilst Thomas accepts this potential 'adverse selection' (Guston 1999, 2001), for Oliver the irreversibility of most dental treatment limits his willingness to blend the SCSCs' educational and service provision roles. Instead he is content having treatment from qualified SCDPs whilst being a 'living textbook' for students to observe.

4.4 Changing the Future

Whilst SCSCs are primarily concerned with dealing with the present service and educational needs of patients and students, by doing so they also have the potential to influence their future dental trajectories. This section explores the longer-term aim of dental participants to influence patients' future engagements with dentistry as well as addressing their immediate needs. By bringing the lay and dental worlds together into one place, the boundary between their currently incommensurate natures is hopefully blurred and made permeable, so that both worlds can interact more easily in the future.

4.4.1 Passing Through: Rehabilitating to Primary Care

The SCSCs' function as boundary organisations has already been illustrated through their intermediary role between the GDC's education requirements and patients' service provision needs. Perhaps a more obvious way in which they fulfil this role is in their bridging capacity between the worlds of primary care dentistry and anxious patients.

Boundary organisations combine the concepts of social world interaction and work delegation (Guston 1999, 2001). Patients' delegate the provision of their dental care to SCSCs, and by referring patients to them PCDPs do likewise. Whilst SCSCs meet their overt aims of providing access to dentistry for anxious patients, most PCDPs also expressed a secondary ideal of SCSCs being a route for easing patients into dental treatment within primary care. This 'rehabilitation' was envisaged as occurring by experiencing dentistry at the SCSC '*access point*'

(Giddens 1990, p. 84) whilst sedated, which would allow patients to learn⁶⁰ about its benign reality without the fight-or-flight mechanism interfering.

[the SCSC] is there to help them have their treatment, but the eventual aim should be that they can gradually have treatment in the [primary care] surgery with local anaesthetic. [PCDP6]

[ideally] they explain to them in a nice positive way is that "our hope is that we will treat you with sedation but that gradually we'll be able to lower your need for sedation so that then, in x number of months/years, you will be able to go back to see your dentist and have routine treatment done".(PCDP7]

I don't know what the remit is now, but I would hope that part of it would be desensitising. So that you start off with a really nervous patient, and you end up with a patient who understands their fears and are able to handle them back in the general practice. [PCDP2]

Once patients got over the initial barrier to engaging with any form of dentistry that their fear created, PCDPs felt the aim should be for patients to comprehend that it was not as bad or as overwhelming as they feared. By gradually adapting their sedation needs and developing psychological insight, they could then learn to accept dentistry without sedation (RCA 1999; Ryder and Wright 1988).

SCSCs are quasi-independent settings where general dentistry and anxious patients can interact within a third space which is not a primary care dental practice. Boundary organisations were originally conceived as being non-partisan intermediaries '*exist[ing] on the frontier of two relatively distinct social worlds with definite lines of responsibility and accountability to each*' (Guston 1999, p. 93). As Huitema and Turnhout's (2009) analysis demonstrates however, in practice they are not always able to be independent. Instead they contain the same conflicting pressures and pulls towards advocacy of a particular view as their individual members because '*a boundary organisation's focus...can affect its orientation*' (p. 591). Likewise SCDPs, though mediating between patients and PCDPs, clearly

⁶⁰ Whether this outcome is achieved is discussed in Chapter Eight.

have an allegiance to their PCDP colleagues and generally demonstrated advocacy towards their long-term rehabilitation agenda. Although they rejected a deliberate process of 'weaning' patients off sedation, like the referring PCDPs SCDPs hoped that the experiential knowledge of dentistry gained by attending SCSCs would gradually ease their return to primary care attendance. In doing so, SCDPs illustrate Wilensky's (1967) analysis that the internal motivation and orientation of such mediating 'contact men' [sic] (p. 10) can have an idealist 'missionary' motive as well as one of 'professional service' (p. 85-86).

[An] other gold standard would be to think that by the end of the treatment that you have acclimatised your patient to accept dental treatment by anyone anywhere, so that the patient is rehabilitated. [SCDP12]

[having] sedation, you are actually coming into the surgery. You get in the surroundings, but you are feeling more at ease about it all. I think that's important, it's like breaking them into it gradually. Whereas if you go to a counsellor, you are just in an office, but they can just come into the hospital, they can be surrounded by all the dental stuff. [SCDP5]

This view was expressed more as a hope than as a clinical policy, and in keeping with other providers (Milgrom and Weinstein 1993) was seldom expressed overtly, remaining hidden from patients. As a directing ideology it *did* affect SCDPs actions. As SCDP11's account illustrates (p. 209), although avoiding DGA is ostensibly about safety, SCDPs practice a 'generous constraint' (Gomart 2002) which limits avenues of action, because if they gave '*just that glimpse through the door [of DGA, patients] would be through it*'.

Rehabilitation was generally acknowledged as an ideal, but not thought to be a realistic goal, due to the constraints of secondary care provision and the willingness of patients.

I don't think in our role now that we can aim to get patients off sedation. That's an aspiration, and it was a goal when I started up ...but now within the service that we offer it is still aspirational, but it's not achievable. So

[whilst] I think you can wean patients off sedation, I don't think in our environment that's applicable. [SCDP7]

I think that it is a worthy goal to try to get a patient from the reliance of a pharmacological mechanism to not needing it. So is it a goal? Yes it is a goal. Is it achievable? Am really really not convinced that it is achievable. [SCDP11]

This reservation regarding the long-term outcome of SCSCs can be examined in the light of participant status and knowledge. In his discussion of scientific work, Collins (1984 [1992]) proposed that the further away from the actual work of something that individuals are, and therefore the more simple their awareness of the situation, the more the work is 'believed' in and seen as straightforward because '*distance lends enchantment*' (p. 145)⁶¹. Translating this idea into clinical rather than scientific work, it would be reasonable to expect that PCDPs, as those furthest away from the everyday use of sedation, would put more faith in its rehabilitative potential than clinicians with decades of experience. Whilst SCDP7 had weaning patients off sedation as "*a goal when [they] started up*", experience and a greater understanding of the situation has tempered this expectation. Whilst this was generally borne out by the participants, with the majority of experienced SCDPs sceptically hopeful about the SCSCs' rehabilitative potential, this pattern was by no means clear. Some very experienced SCDPs expressed a rehabilitative intention, whilst PCDPs with only previous undergraduate sedation education voiced doubts about the long-term outcome of patient attendance.

4.5 Conclusion

This chapter explored the interpretations and aims that participants have of sedation provided within SCSCs. By doing so, it highlights the role of SCSCs in hosting the social worlds of referring PCDPs, mediating SCDP '*contact men*' [sic] (Wilensky

⁶¹ This is discussed, and related concepts outlined, in (Collins and Evans 2007, pp. 20-21).

1967, p. 10), the political world of GDC policymakers, and the '*latent sub-world*' (Tovey and Adams 2001, p. 698) of anxious patients within one 'boundary organisation'. By accommodating the boundary between these different groups, and balancing the demands of each, boundary organisations provide a site for interaction which seeks to address each party's concerns.

Both patients and clinicians share an agenda of providing access to dental services. To achieve this, participants use the standardised package of sedation which, whilst having a stable outward form, is capable of embodying different symbolic information. It is seen as an avoidant DGA analogue, a safer alternative to DGA, and a facilitator of (re)habilitation to PCDP treatment. Standardised packages (and the boundary objects they are formed from) can either assist or impede cross-boundary interaction, '*the mode of function [depending] on the meanings that these objects encapsulate for the recipient community*' (Fox 2011, p. 80). Whilst these attributed meanings differ, they are not incommensurate as the rehabilitation agenda is hidden, so interaction between dentistry and patients focuses on the immediate aim of achieving successful dental treatment.

In addition to service provision within the clinic, SCDPs also mediate between patients and dentistry's political sphere. Whilst patients access treatment through the provision of services, the GDC's agenda is to provide experiential knowledge for training students. By '*involv[ing] the participation of actors from both sides of the boundary, as well as professionals who serve a mediating role*' (Guston 2001, p. 401), SCSCs aim to provide a middle ground where clinical treatment, rehabilitation to regular primary dental care, and educational activities can take place.

The SCSC is an accommodating space which hosts different social worlds, and is able to contain the different demands each world brings. Having identified differing agenda, the following three chapters examine the process of providing sedation.

Chapter Five - Performing Sedation

5.1 Introduction

The following three chapters examine the social processes of providing sedation within SCSCs, exploring the front-stage work of hosting patients and the back-stage work necessary to facilitate it. This chapter explores the public display of performing treatment with sedation in the light of Goffman's (1959 [1990]) dramaturgical concept of self-presentation. The performance of sedation treatment is seen as a literal public display of SCSCs' 'ceremonial order' (Strong 1979; Strong and Dingwall 2001). The first section identifies the importance of (re)presentation to the relationship between anxious patients and dentistry. The next section discusses the importance of the influence of physical space on perception and explores the role of SCSCs as sites of theatrical performance. The last section focuses upon the personal performance of sedation clinicians as integral to the provision of successful treatment.

Within this chapter, 'SCDPs' refers to experienced clinical staff (nurses and dentists), 'students' refers to both undergraduate and postgraduate trainees in sedation, and 'clinicians' refers to either students or experienced dentist SCDPs.

5.2 The Presentation of Dentistry in SCSCs

The theatrical metaphor of self-presentation as managed performance (Goffman 1959 [1990]) is useful for understanding the interaction between anxious patients and staff within SCSCs. The use of sedation does not take place in a vacuum, but is part of a specific situation, all elements of which contribute to the encounter rather

than being abstracted or irrelevant 'context' (Clarke 2005; Clarke and Fujimura 1992b). Consequently both the providers of sedation and the environment they provide it in are significant to patients' perception of sedation and the dentistry it is augmenting.

Clinical dentistry is an '*abstract system*' (Giddens 1990, p. 80), a generalised organisation of expert knowledge and skill '*disembedded*' (p. 22) from one specific time and space, which affects and is used by patients without them possessing such competencies themselves. Such abstract systems are a consequence of modern society, where 'lay' individuals are removed from the mechanics of 'professional' aspects of society and have to entrust them to specific individuals⁶². Such systems rely on relationships of trust formed by social engagements, and the expert system that such engagements facilitate. Abstract systems become embodied and concrete through their engagement with society at '*access points*' (p. 83), where individuals meet the systems' 'flesh-and-blood' members. As sites of connection, such contacts can have significant consequences, with both the potential to weaken and strengthen the abstract system's outside perception.

Patients who have high dental anxiety generally avoid engaging with dentistry unless driven to by necessity (Abrahamsson *et al.* 2001; Mejía *et al.* 2010; Nuttall *et al.* 2011). SCSCs are not "the dentist's" in the usual lay understanding of the word⁶³ however they *are* dental clinics, employing dental professionals in a recognisably dental environment. As the first dental environment that patients may have engaged with for a significant period of time, SCSCs are therefore potentially important access points to the dental world. They are places '*of vulnerability for [dentistry], but*

⁶² Any intangible body or system of expertise is a form of abstract system. For example, air-travel, dentistry, law, medicine, plumbing, internet-provision, or politics. All are vague concepts that (apart from dentistry) I don't know how to do, so I have to engage with others and entrust them to do it on my behalf.

⁶³ That is, a primary care dental practice situated in a converted domestic dwelling or shop.

also [ones] at which trust can be maintained or built up' (p. 88). Part of the process of building up trust in order to overcome the barriers to engagement that anxious patients feel, involves influencing their interpretation of 'dentistry' through the 'face-work' (Giddens 1990; Goffman 1967) of both initial impression management and subsequent treatment experience. As theatrical endeavours, the presentation of both the actors and the theatrical backdrop of SCSCs performed at these sites therefore become significant and worthy of consideration.

5.3 Presenting the Clinic Setting

This section examines the importance of SCSCs' physical space in providing the theatrical backdrop for sedation. Dental treatment undertaken with sedation is located within a particular setting. SCSCs are part of *'the elaborate scientific stage provided by large hospitals'* (Goffman 1959 [1990], p. 34), which are loaded with meaning for attending patients. Like any performance, settings contribute to the audience's experience by defining the situation, and supplying the stage, scenery and props for it to take place within. They may be permanent, or temporarily static⁶⁴ - set up for a defined period but readily disassembled. Considered from this perspective, both physically permanent SCSCs and transient SCSCs operating in other clinical spaces may be thought of as part of the 'front' of sedation provision.

5.3.1 The Importance of Physical Space

Physical spaces such as dental clinics are not neutral areas of treatment, but are socially as well as physically constructed (Prior 1988, 1992). They are interpreted by their inhabitants, and consequently affect them by developing and constraining them (Prior 1992). Prior's analysis of hospital architecture examined space as a social

⁶⁴ Theatrical shows can be resident such as 'The Mousetrap' or mobile such as those on provincial tours.

construction which reflects the hegemony of the time of its design and subsequent modifications⁶⁵. The provision and design of physical spaces not only reproduce the prevailing cultural structures of their designers, users and society, but also cement them and make them tangible, normal and assumed, thereby justifying them in a mutually reinforcing circle⁶⁶. Children's wards were created and developed as society began to recognise 'children' as distinct entities, and subsequently changed as it embraced new theories of disease and social psychology. By becoming a physically visible point of reference for these paradigms, they consequently reinforced these theories' assertions. This social-spatial relationship is reflected in other medical settings. Mental health developed from set-apart asylums, which isolated in-mates and disciplined them through a 'panopticon' (Foucault 1995), to become psychiatric hospitals, which reflected a political move to 'community care' by being placed within easy access of society (Nettleton 2006b; Prior 1988). As such, their structure reflected society's general culture and construction of mental illness. In contrast Foucault's (1963 [2003]) historical analysis of the development of clinical medicine in 18th century France shows the role of hospitals to separate out patients and classify them to aid teaching. Their design therefore reflected the local culture of the hospital staff and the contemporaneous medical world which saw diseases as separate biological entities to be isolated in order to comprehend them rather than parts of a holistic picture where health is a *'state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity'* (WHO 2012).

⁶⁵ Physical modification of a clinical space is a manifestation of the modification of the prevailing paradigm.

⁶⁶ By justifying I mean for example that the provision of a specific children's ward provides visual evidence that 'children' are socially recognised as specific entities in their own right, rather than little adults. The reproduction of these cultural values in a concrete form subsequently substantiates the abstract claim that children are not adults: because children are not adults they have their own space, and because they have their own space they must be different from adults.

5.3.2 The Importance of SCSCs

Like Prior's examples, the physical structures of SCSCs are perceived as having a significant impact upon their inhabitants, and are themselves impacted by social demands and the prevalent culture of their users. SCSCs physically demonstrate a tension in their ascribed purpose⁶⁷. Rather than embodying the practices of anxiety management, with modifications to accommodate their educational role, SCSCs generally reflect an educational intention with subsequent modifications to accommodate anxious patients. Their educational component creates them as open, observable spaces, which are then adapted to reflect the idea of the 'anxious patient' requiring security, privacy and freedom from distraction in order to relax. By doing so, SCSCs illustrate the gradual 'construction' of dental fear as something located in a social space (Nettleton 1989, 1992)⁶⁸.

Sited within educational hospitals, SCSCs' size, and the amount of work that was going on in the surrounding location, was commented upon by both patients and treating clinicians. Educational treatment necessitates supervision by experienced clinical teachers and therefore requires SCSCs to lose some of the privacy that might be ideal for anxious patients.

A lower wall allows you as a supervisor to check, because we don't have one supervisor per person on the student. [SCDP13].

being open, you can see what is going on really easily without getting in everybody's way. [SCDP11]

The educational clinic is a form of 'panopticon' (Foucault 1995), subjecting both patients and treating students to the supervising clinicians' 'gaze' (Foucault 1963

⁶⁷ See Chapter Four for a discussion of the different interpretations participants have of SCSCs.

⁶⁸ I.e. although 'children' were socially recognised *before* the construction of dental hospitals, and therefore had a dedicated clinic as part of the design, 'anxious patients' were not generally given the same status until the turn of the century when hospitals were subsequently modified after ACD (DoH 2000).

[2003], 1995). By performing dentistry under this clinical or dental 'gaze' (Atkinson 1995; Nettleton 1992), students turn it inwards upon themselves internalising their supervisors' ideologies and standards, whilst patients are understood, disciplined and 'constituted' (Nettleton 1992, p. 106). Unlike other general dentistry clinics however, the ability of SCDPs to be all-seeing is limited. SCSCs' reliance upon psychological as well as pharmacological factors to relax patients⁶⁹, require that the physical environment which sedation is provided in should be conducive to that end. As such the open-ness of panopticon clinics were not thought to be ideal by SCDPs because of both their size and compromised privacy, especially when SCSCs were located on shared clinics where other dental work was also going on.

I think that there [are] lots of aspects of our sedation clinic that I think we would all admit that are not conducive to good sedation, like the traffic that goes through, they are all open units and some patients find that quite uncomfortable. [SCDP12]

Some patients will just walk on to this vast open clinic and suddenly think "oh crikey this is far too big, I can't cope with this!"... [L]ots of people who just walk in see us as a threatening environment, and I think again having that big, it is not helped by our open clinics because that probably enforces that for those group of patients. [SCDP11]

SCDPs juggle a tension between needing to observe treatment, and their awareness that the subsequent open-ness may negatively impact privacy, cause distraction and become too big to cope with, all of which affect the delivery and perception of treatment. Despite these concerns, they recognised that the effect of open, gaze-able clinical areas depends upon individual patients' perceptions.

For some patients they could love the fact that they are coming and having expert treatment, for others it is very intimidating coming to a hospital and makes them more nervous possibly, an environment they don't know, you know, lots of people around, mingling, possibly, you know, lots more dentists, people they don't know, it couldn't be worse for them really. [SCDP6]

⁶⁹ See Chapter Six for further discussion.

This mix of anticipated potential reactions to the clinic was reflected in the range of actual reported experiences. For some patients open clinics and lots of people around were reassuring. For others, it made the experience more difficult.

the bigness of the room helps me...I don't feel that I'm closed in, don't feel panicky. [Eve]

I felt more confidence going to a hospital than I did going to local dentist. You are sat in the waiting room in the dentist and there's one receptionist, one nurse comes down to take you upstairs, where in the hospital there's loads of people so you don't feel alone! [Thomas]

First time I went to the hospital, I thought it was just like a room. Then I came in, I was like "Jeez, there are so many!" It was 4 in a row. I like my privacy, if I want to scream I want to scream, you know? [Oliver]

The clinic's architecture, whilst designed to facilitate education, has an impact on the treated patients by placing them in large settings and exposing them to observation. Some patients are reassured by the difference from PCDPs, as the busy-ness and openness prevent them feeling isolated and claustrophobic. However this openness comes at a cost to privacy, which would reassure others and reduce their vulnerability and embarrassment. The management of sedation's backdrop therefore requires a balance between the practical aspects of treatment in an educational establishment and the requirements of the treatment itself. In order to balance these opposing tensions SCDPs modified the privacy of their clinics using such 'props' as having

a little bit of our clinic partitioned off, so it is a little bit quieter, [and] the radio on a bit lower. [SCDP11]

higher screens that give the patients a bit more privacy...notices on the door telling [people] to use other doors, and where it is open at the end, at their feet, [putting] up a screen if they need a bit of additional privacy [SCDP9].



Figure 5.1 Cubicle with frosted glass screens for privacy and isolation



Figure 5.2 No Entry sign preventing 'through-traffic'



Figure 5.3 Foldable screens preventing 'through-traffic' and giving privacy

Through the use of screens and partitions, SCDPs modify the stark, open, clinical 'stage' from a panopticon to make their theatrical setting more conducive to hosting patients. Like domestic parlours which also have a hosting role, the environment is adapted to make the visitors more comfortable (Grier 1988). Through this scenic adaptation, SCSCs become dental hinterlands which are comfortable enough for patients to attend. They are partly reminiscent of large educational and hospital locales but disguised and adapted enough to infer the privacy and enclosure that PCDPs embody. SCDPs manage the SCSC environment in order to succeed in the performance they are trying to give, and to prevent intrusions on the scene which may threaten it (Emerson 1970). Such modifications (see Figures 5.1 to 5.3) form a '*metaphorical membrane*' (Goffman 1961, p. 65) which isolates patients from the rest of the world and creates a separate enclosed space for them. The enclosure is intended to facilitate feelings of trust and safety, and reduce distractions. What happens during an encounter within this space is tied to the ability of the membrane to manage its seclusion from the outside milieu. Like its biological counterpart, ideally the protective 'membrane' is selective, preventing influence from the external environment whilst facilitating an effect which can encourage movement out into such an environment afterwards.

Privacy is not the sole challenge that SCDPs encounter in their performance, as the whole setting is embedded with meanings which are open to interpretation. Within clinics, '*décor and equipment complete the medical mise en scène*' (Atkinson 1997, p. 94). Strong's (1979; Strong and Dingwall 2001) discussion of the ceremony of the clinic notes that attending a hospital clinic creates a strain between their overt service role and their setting. Although domiciliary dental care is indicated for some anxious patients unable to attend clinical settings (Fiske and Lewis 2000), like Strong's sites of analysis SCSC clinicians '*did not see patients in their own homes at their own times*' (Strong and Dingwall 2001, p. 150). The 'performance' of

sedation *has* to be undertaken within a dental environment due to the standards of equipment and environment that are required for safe provision (SDAC 2003). Whilst SCSCs differ from primary care environments in some structural respects, the technology of clinical dentistry: the furnishings, machinery and restorative materials have to remain the same.

That can be quite disturbing for a patient- having all these sort of peripheral activity that they can see going on, the noise of the drill, maybe the smells of acrylic or whatever it might be, all of these things happening... Classic isn't it?, Sound, maybe even smells, you know, your sound, your smells, the general ambience of what is going on, decoration, everything is definitely very very important. [SCDP11]

SCDPs recognised that the information SCSCs conveyed about dentistry were important and potentially detrimental, reflecting Goffman's (1959 [1990], p. 100) assertion that whilst additional information can be conveyed by setting a personal performance in one's own environment, this comes at the cost of losing the ability to control the information imparted. Despite these concerns, SCSCs' aroma was not perceived as a problem by patients. Indeed one participant specifically thought large clinics dissipated any 'dental' smell:

when I walk into a dentist there is a certain smell in the dentist, which as soon as I get in that door, I want to walk back out. But when I came to the hospital it wasn't here, and it was a bigger room. [Eve]

Whilst SCSCs' physical dimensions may minimise some aspects of treatment, such as aroma, the lack of enclosure can also maximise others, such as sound travel. Sedation aims to relax patients in order to encourage dissociation away from treatment.

[Y]ou are trying to take them into a situation where you want to be able to project onto that this feeling of serenity, of assuredness and then, you want them to concentrate on you; and that can be quite a challenge. Then superimpose onto that the fact that when you are sedating a patient you really want somewhere quiet where you can create this ambience. [SCDP11]

Busy, noisy clinics can be a distraction for sedation patients, preventing them from ‘drifting off’, and the lack of quiet ambience due to travelling sound was recognised by SCDPs as a significant problem.

we know that hearing is one of the last things to go as patients are starting to relax and you know lots of people say they actually become quite hyper-sensitive to sound as you are going under sedation. So if you can hear people talking to other patients and things going [on]...? [SCDP12]

In order to manage this deficiency, SCDPs sought to minimise the exposure to sound through efficient treatment, and to guide patients’ interpretation in order to prevent them imagining the worst:

prior to [the SCSC] I was allowed to believe what my mind was telling me, ‘oh that’s making a lot of sound, that’s going to make an awful lot of pain’ where now the dentist will do a little test show you something on their hand you know? It’s a little bit more... gives you a little bit more, a lot more confidence and a little bit more secure where it sounds awful but you know they’re not just going to go in and butcher somebody with these shiny tools that make lots of noises! [Olivia].

SCDPs tell their patients what is about to happen, and depending on the type of sedation used may demonstrate aspects before actual treatment. By doing so they provide a framework for patients to fit their experiences into. This ‘Tell, Show, Do’ is a standard part of behavioural management taught to all undergraduates and practiced by PCDPs as much as SCDPs.

Despite the drawbacks of open clinics, the location of SCSCs within University Dental Hospitals⁷⁰ affords SCDPs ‘*the opportunity of conveying [positive] information...through scenic means*’ (Goffman 1959 [1990], p. 100). As a consequence of well publicised discrepancies between the actual and perceived

⁷⁰ Other secondary care settings **do** exist outside of university hospitals, such as district general hospitals, community dental clinics or specialist practices, but these are not the object of investigation and therefore are not discussed.

safety and quality of hospital environments⁷¹ patients might be expected to have a cynical view of healthcare provision, yet the two main messages that the clinics conveyed were expertise and safety.

I wouldn't go to the dentist. That's how I feel. I've got more faith in the hospital than I have with an ordinary dentist in a house. Perhaps it's because I know that's a little place in there- that man. It's only him and that nurse there, but in the hospital if anything happens to me they've got all things around them to help me. To bring me around and see to me. [Grace]

This idea that hospital-based SCSCs are more trustworthy reflects the importance of perception upon subsequent belief. Hospitals have resources and access to medical care which inspire faith and which 'an ordinary dentist' does not have. Through the multiple embodied messages conveyed by their structure and personnel, SCSCs convey positive messages about their safety and reliability.

5.4 Presenting as a Clinician

Having explored the *mise-en-scène* for sedation, this section examines the roles that clinicians play in undertaking this performance. Like all dramas the setting can provide information to the audience about the story presented, however the backdrop is only part of the 'show'. By hosting patients within SCSCs, clinicians communicate messages themselves as the hosts. In addition to the presentation of the clinical 'setting', the performance of sedation for anxious patients therefore also involves the successful self-presentation of the acting clinicians.

Clinical encounters contain elements of ceremony and drama (see for example Atkinson 1997; Silverman 1984; Sinclair 1997; Strong 1979; Strong and Dingwall 2001). The performance of 'healing' is as important as the act of healing itself and

⁷¹ Hospitals are not necessarily the medical utopias of excellence that patients think they are or should be. See for example, (Campbell 2011, the Guardian 2001).

requires a 'presentation of self' (Goffman 1959 [1990]) to create the appropriate physical and psychological environment. Post-industrial eyes can fight the familiarity (Delamont and Atkinson 1995) of this performative work, by considering the role of shamans. In her analysis of magic and rituals, Douglas (1966 [2002], pp. 87-89) illustrates the importance of symbols and social manipulation in shamanic healing to effect a cure, and in his discussion of shamanism Lévi-Strauss (1963) states that '*Quesalid did not become a great shaman because he cured his patients, he cured his patients because he had become a great shaman*' (p. 180). Rather than illustrating a placebo effect, these accounts demonstrate that treatment is enhanced by the approach of the 'healer', who does not need to know or *believe* their practice will work in order for it to have an effect but rather needs to *show* that it will work. This requires the management of internal emotions and the presentation of appropriate behaviour.

Patients' perceptions of their dentist have a significant impact on their anxiety. In one study this was assessed on dentists' perceived ability to provide painless dentistry; to work in a confident and careful manner; their patience and politeness; and the creation of a pleasant and relaxing atmosphere (Eli *et al.* 1997). This ability to undertake competent treatment, and to manage the emotions of both themselves and their patients reflects the inverse of the anxiogenic 'unsupportive dentist' (Abrahamsson *et al.* 2002a) which involved two items of pertinence to treatment within SCSCs- the perception of the dentist's empathy and their ability. These patient-defined concepts were also shown in PCDPs' expectations, who thought a SCDP should be

somebody who is fairly sympathetic towards the patient, and who is clinically competent and they know what they are doing. They know the limits of what they can achieve with the sedation. [PCDP3].

Abstract terms like ‘competent’, ‘efficient’, ‘empathetic’ and ‘caring’⁷² expressed by participants when discussing sedation providers, reflect an ‘*appearance and manner*’ (Goffman 1959 [1990], p. 34) which is ‘*idealised*’ (p. 44). Whilst participants might understandably *wish* to be treated by caring staff, what they actually judge is their experience of clinicians’ *expressions* of care. Clinicians working within SCSCs meet these expectations by conveying an image of approachable individuals who would provide competent and efficient dental treatment in a caring and empathic manner.

5.4 1 Managing Emotion

Clinicians’ demonstrations of interest and an empathic approach contribute to SCSCs’ personal fronts, which for performers in service work ‘*often [has as] its major purpose [the aim] to establish a favourable definition of their product or service*’ (Goffman 1959 [1990], p. 83). To encourage patients to accept dental treatment, clinicians must overcome patients’ distrust and ambivalence (Abrahamsson *et al.* 2002b; Milgrom *et al.* 1995) by presenting themselves as benign. The ability to encourage engagement is contingent on their self-portrayal as the ‘supportive’ dentist, and involves the management of their own as well as their patients’ emotions. The management of emotion can be understood in the light of work by Hochschild (1979, 1983) on the ‘emotional labour’ undertaken as part of paid employment, and Strauss *et al.* (1982; 1985 [1997]) writing about the ‘sentimental work’ of medical treatment.

Emotional labour derives from a Marxist approach to work which commodifies labour as wage-labour (Brook 2009). It is part of a paid public-contact role,

⁷² These terms are abstract in the sense that participants might agree that a dentist should be caring, but how caring? In what way? ‘Caring’ to one individual may not seem caring to another.

important when working in emotionally intense and '*distressing situations*' (Hunter and Smith 2007, p. 859) such as those involving fearful individuals, which involves

'the management of feeling to create a publicly observable facial and bodily display [which] requires one to induce or suppress feeling in order to sustain the outward countenance that produces the proper state of mind in others' (Hochschild 1983, p. 7).

As such it is a 'performance', requiring '*surface acting*' (pretending to have a feeling) or '*deep acting*' (inducing a feeling within oneself) (Hochschild 1983, p. 33) to achieve work.

Sentimental work is a wider concept, encompassing aspects synonymous with emotional labour, and involves a variety of emotion-orientated work undertaken during patients' treatment trajectories '*to get the work done efficiently or because of humanistic consideration*' (Strauss *et al.* 1985 [1997], p. 129). As dentistry's '*contact men*' [*sic*] (Wilensky 1967, p. 10) and '*access point*' (Giddens 1990, p. 83), SCDPs are important in initiating and then continuing the relationship between clinicians and patients. SCDPs seek to undertake 'rectification work' (Strauss *et al.* 1982; Strauss *et al.* 1985 [1997]), repairing the relationship between the dental and lay worlds by demonstrating a 'patient-centred' approach. In order to achieve this, they develop a relationship with anxious patients through their 'trust work', and diminish unpleasant elements of dentistry by hiding or ameliorating them through 'awareness context work'. Sentimental work is not often an explicit or accountable part of a job description, but was recognised by SCDPs in their account of the work they undertake. In order to successfully manage dentally anxious patients, the performance of sedation requires a considerable amount of emotional management. SCDPs were conscious of an idealised persona they were portraying as part of their trust-work in order to overcome patients' reticence. As hosts within SCSCs, they put effort into putting their visitors at ease by an emotional performance.

I am trying to portray a relaxed, confident, assured, safe, image. Somebody who is empathetic, who understands your issues and is here fundamentally to help you confront them, and I think that that hopefully will give the patient a sense of “this is a safe technique, this is something that is going to work for me”. [SCDP11]

SCDP11 acts out an image during their clinical engagement with patients. The empathic, patient-centred orientation that patients perceive is depicted by SCDPs in order to emphasise their approach to treatment. Patients do not actually know whether a dentist is a threat to them or not, they must judge based on their perception, and that perception is guided by the image SCDPs project through their ‘face-work’ (Giddens 1990; Goffman 1967). Reinforcing Levi-Strauss’ shamanic example, clinicians’ actual empathy and clinical skill would be impotent if it were not conveyed in some way to the patient. Clinicians need to outwardly *demonstrate* empathy and competence, to make ‘a good showing for [their] profession’ (Goffman 1967, p. 5). SCDPs often defined their patient-centred approach to treatment as contrasting against a more task-centred approach used by other colleagues.

I think you’ve got to like helping people as well... Anybody can squirt someone full of midazolam and hope for the best, but I think that if you’re somebody who likes helping people then you’re much more likely to achieve a satisfactory result than if you’re monosyllabic and just kind of “Come in, sit down, give me your arm”, squirt, and off you go. Oral surgery approach really. [SCDP2]

This can be seen as a form of moral accounting, reflecting the traditional surgeon/physician contrast of procedurally-centred versus patient-centred approaches to treatment. In reality clinicians’ foci are not coincident with their dental interest⁷³, although the difference in trajectory between a short-term oral surgery need and a longer restorative treatment plan do affect use. Rather than aim to remove long-term anxiety, oral surgeons use midazolam to overcome the immediate awareness and anxiety of a specific traumatic procedure and to prevent it being

⁷³ Oral surgeons and restorative dentists can be either procedure- or patient-focussed, and members of both specialities have been past presidents of the DSTG.

remembered afterwards. Whilst the illustration overtly contrasts personal attitudes, its purpose is to demonstrate a belief in the importance of demeanour, confirming patients' reported beliefs where

a top of the range dentist, if he's all, (uses flat sad tone) "alright how are you come in" people just don't want to know. [Thomas]

SCDP2's account focuses upon both internal motivation and expression. Emotional display is likely to be more successful if it matches internal emotions, yet regardless of actual orientation, without demonstrating a winsome demeanour the intangible aspects of dentists' clinical skills remain unknown. The 'satisfactory result' of patients' willing to engage, is built upon rapport and image. This dramaturgical aspect of treatment was successfully conveyed to patients, who felt SCDPs

were honestly concerned with you all the time, they show you they care about the work you know? [Oliver]

they've got affection for their patients, that's all I can say, they are concerned what happens to you, that's all I can say about them. [Thomas]

Clinicians manage patients' anxiety and 'show' a sense of concern. In order to convey this, they must overtly perform it by emphasising the 'ideal' aspects for the audience's benefit (Goffman 1959 [1990]; Hochschild 1983). Such concern and emotional management is intended to influence patients' emotions. However the ability to impact another through one's own emotional displays is a two-way process and another aspect of the performance of sedation is the management of emotional influence or 'contagion'.

5.4.1.1 Containing Emotions

The management of anxious patients has a significant impact on staff, who reported the ironic situation that sedation provision creates personal stress as an outcome of its aim to reduce stress.

you are putting a lot more into getting your patient to try and relax, make sure that they are more comfortable, it is a lot more stressful than doing routine [restorative dentistry] on someone who is not anxious at all. [SCDP9]

I do think that sometimes the patient does put a bit of a strain [on you]. If you've got a particularly demanding patient, it does put a bit of a strain on everyone. Definitely. 'Cause it takes a lot out of you. I suppose people do start getting a little bit stressed... I think it's the reaction of the patients that affects everybody. If they're screaming blue murder and generally playing up you can't do your job properly, and you've only got a limited amount of time you can do something, I think you do get a little bit edgy then. But it's never anything major. Once the patient's gone it's usually okay. [SCDP1]

it is very difficult to treat a very anxious patient, I think their anxiety imparts onto the dentist slightly – a relaxed patient is a lot easier to treat than a very anxious patient. [SCDP10]

As clinicians experience stress and anxiety from their patients, this is internalised so that they become stressed and anxious themselves. This stress of providing treatment for anxious patients reflects previous studies which place them within dentists' top ten stressors (Cooper *et al.* 1987; Humphris and Cooper 1998; Moore and Brødsgaard 2001; Wilson *et al.* 1998). SCDP10's observation that '*a relaxed patient is a lot easier to treat than a very anxious patient*' is somewhat ironic⁷⁴, as this attribute is the *raison d'être* of SCSCs, integral to their clientele and the treatment they provide. Working in a clinic which specifically treats anxiety, clinicians are in a continually stressful situation induced by the patients' anxiety, as well as coping with the individual daily stresses of normal clinical dentistry, *and* the additional stresses of the technical provision of sedation (such as cannulation). Such situations not only place an emotional demand on clinicians, but also require

⁷⁴ It reflects a tension between ideals and reality in a similar way to Nettleton's (1992, p. 65) observation of the tension between dentists' threat to passive patients and their aspiration to intervention-less gazing, and sounds like a dental version of Richard Nixon's comment that '*Politics would be a hell of a good business if it weren't for the goddamned people*'.

the prevention of its transmission in order for treatment to be effective. This personal anxiety or stress must be prevented from being conveyed by clinicians' internal psychological control.

I think that, no matter how experienced you are there, there's always this background anxiety of treating anxious people – you've got to be careful that you don't impart any anxiety onto them. They are already pretty anxious – so you don't want to make matters worse. So I think you've always got to give the appearance of being quite calm and relaxed about things, and trying to let the fact that the matrix band⁷⁵ doesn't go down, ride a little bit. [SCDP10]

[You need to] be fairly thick skinned because you get people who say "I hate dentists, and I hate you in particular" and all that sort of stuff, so you have to compartmentalise that and think "well that's just their anxiety making them talk like that". [SCDP2]

SCDPs selectively manage the image they portray. Whilst giving off messages of care and concern they also act to prevent themselves giving off self-defeating messages about the stress they feel in such a role. The 'front-stage' and 'back-stage' work integral to SCSCs is embodied in their communication styles. In addition to the empathic concern which patients experience, PCDPs expect and SCDPs portray, another variable of empathy is 'emotional contagion' (Levenson 1996; Omdahl and O'Donnell 1999). Emotional contagion is emotional convergence as a consequence of reflecting back the physical manifestations of another person's emotions (Hatfield *et al.* 1992). The language used by respondents, e.g. 'affects' or 'imparts' (p. 154), reflects this metaphor of emotional infection rather than autonomous choice. Part of the emotional labour that SCDPs undertake involves preventing this emotional effect between patients and clinicians. Considerable effort is put into quarantining patients' emotions and containing their own- preventing themselves from emotionally converging with the antagonistic presentation of their anxious patients and trying to induce a caring attitude. The use of emotional labour to prevent emotional contagion is supported by Kulich *et al.*'s (2003) exploration of

⁷⁵ The ring placed around a tooth to prevent a filling falling out of the side of an open tooth cavity whilst it is being placed.

'patient-centred dentistry'. In their study a substantive code was *'The dentist adjusts his/her attitude to the patient's personality but his/her professional role is only moderately adjusted to the patient's situation'* (p. 178). Whilst demonstrating flexibility and adapting to the specific patient, patient-centred dentists should avoid being emotionally affected by the patient themselves. This concept was illustrated by one of their participants:

"The dentist adjusts his/her role to the patient, but is not a mirror of the patient. Dental phobic patients are anxious and fearful. The dentist must make the patient feel secure and should as little as possible be affected by the anxious patient" (p. 184).

Such a statement emphasises the approach SCDPs consciously take. Its unproblematic report could be taken to imply that this ability is an inherent quality of patient-centred dentists rather than a deliberately chosen action. In reality, to be unaffected requires more than temperament. It necessitates the work of providing alternative interpretations such as *'that's just their anxiety making them talk like that'* [SCDP2] as well as preventing any effect to show by giving the right *'appearance'* [SCDP10]. A portrayal of SCDPs as inherently altruistic and 'patient-centred' fails to acknowledge the interactional work of behavioural management and emotional labour as much as a perception of sedation as merely requiring technical drug delivery skills does⁷⁶.

Whilst those undertaking emotional labour are aware of its place in the range of actions which comprise their work, its presence, functions and skill demands may be completely invisible to others not doing their job (Nettleton 2006b; Strauss *et al.* 1985 [1997]). This invisibility potentially affects both the providing staff and the subsequent delivery of care, as empathic involvement has a complex relationship with burnout. Burnout is a feeling of cynicism and emotional apathy, commonly

⁷⁶ See Chapter Six for discussion of this view of sedation provision.

present in people with interpersonal and service components to their work (Maslach and Jackson 1981). It is composed of emotional exhaustion, depersonalization, and feelings of reduced personal accomplishment. Emotional contagion has been shown to have a significant effect on the burnout of healthcare workers (Miller *et al.* 1988; Omdahl and O'Donnell 1999; Williams 1989) and is recognised by the World Health Organisation as a factor influencing their health status and contact with health services (WHO 2007). By providing empathic treatment in an anxious situation which *'takes a lot out of you'* (p. 154), SCDPs risk such burnout. The presence and management of emotional contagion must therefore be seen as a risk factor for SCDPs' future psychological health, and may also partly explain the failure of undergraduates to take up sedation provision after graduation. The deep acting that SCDPs describe, which seeks to induce internal emotions through reasoned understanding, is less likely to lead to depersonalisation (a facet of burnout) than surface 'faking' of emotion. In addition, the positive impact of sedation treatment for patients can also have a significant positive emotional impact upon them.

I think in some ways it can be more stressful, but it is also more rewarding as well. You have to look at it: is the amount of stress that you are undergoing worth the rewards that you actually get, personal rewards of how you feel at the end of the treatment, of actually successfully treating a patient? [SCDP9]

Space to reflect, like SCDP9, upon the benefits of one's work to patients, and training in ways of managing emotional responses to situations may also prevent burnout (Brotheridge and Grandey 2002; Gorter and Freeman 2011; Totterdell and Parkinson 1999). However, although SCDPs reported engaging in such activity it was not an official structured part of their job.

The perceived importance of emotional labour and its potential consequences are influenced by social constructions of the legitimacy of such work, and of individuals' differing competencies in doing it. Strauss *et al.* (1985 [1997]) assert that

sentimental work is undertaken by *all* interlocutors depending on circumstance, and that reports of delegation to specific colleagues are over-generalisations or come out of occupational and ideological bias. In contrast Nettleton (2006b) notes in her discussion of emotional labour that such '*aspects of health care work are often carried out by those 'lower down' in the medical hierarchy*' and that it is seen as '*women's work*' (p. 160). In keeping with Strauss *et al.*'s (1985 [1997]) conclusions, the use of emotional labour was ubiquitously reported of and by both dentists and nurses within SCSCs. One PCDP did however report a perception of why this would be, which corroborated Nettleton (2006b).

I think its fair to say a sedationist would be a woman, has got kids, who can spend more time and caring nature and all that...women spend a lot of time with their children (normally the stereotype is that the man goes out to work and the lady/woman stays home with the children), so they would be able to develop a lot of caring skills and everything like that as well. I'm not saying men can't do that, but I would say a lot of people who provide sedation, if you asked them who the sedationist would be, would [say] a woman, just because they are perceived as more caring probably than men... it would be a more softer tone in their voice, much more forgiving of their situation and everything like that... I'd say softness – they'd be more sympathetic to their situation... women are more compassionate. [PCDP5]

This assumption reflects Gray's (2009) findings regarding emotional labour in nursing, where images of those providing emotional labour and support were maternal, '*mothering the patient until they feel better*' (p. 171). Contrary to this opinion however, SCDP participants in this project were a mix of 7 female and 6 male clinicians. Within the membership base of the Dental Sedation Teachers Group (the academic, and therefore secondary care, organisation concerned with sedation), approximately 46% are female and 54% are male (Dickinson 2011), and within clinical academia women comprise only 36% of staff (Fitzpatrick 2011). The emotional labour of sedation in SCSCs is therefore a transgender work reported otherwise just as Strauss *et al.* (1985 [1997]) claim.

5.4.2 Demonstrating Competence and Confidence

In addition to the emotional management aspects of sedation 'performance', which determine the manner in which treatment is provided, the projection of personal confidence and clinical competence is also an important part of the 'front' of clinicians, providing information about the ability of the operating clinician and therefore the patients' wisdom in trusting this particular abstract system (Giddens 1990).

In any theatrical performance '*it is expected that the performer of illusions will already know a good deal about how to manage his voice, his face, and his body*' (Goffman 1959 [1990], p. 79). In the same way, participants in 'ordinary' situations are expected to be able to piece together tacit knowledge from other areas in order to bring about a convincing performance. Sinclair's (1997) anthropological account of medical training demonstrates the performative nature of being a student. Using Goffman's (1959 [1990]) dramaturgical concept, he shows that part of developing the medical 'habitus' is being able to perform medicine for patients and peers in the front-stage clinical area. Likewise Atkinson's (1997) ethnography of medical education highlights the importance of students developing a personal front as they change from lay individuals into clinicians, and how they use this front in the performance of clinical tasks. Successful front-stage performance involves creating belief in the character one is portraying, and depends on confident projection. Likewise in clinical settings the scene is credible because the clinician acts credibly (Emerson 1970). When providing sedation, treatment is therefore influenced by the clinicians' projected image.

I do remember one instance was a little bit different to the others, and this individual may have been at the early stage of their course. I wonder sometimes if that person was more nervous than I was. It was the body language they would use: tenseness awkwardness. When you're nervous around somebody, we all do it- you're fiddling with things or you drop things

or you knock something. It's just the awkwardness about the individual made me think, "oh their interpersonal skills needed bringing out a bit".
[Olivia]

A lot of sedation, I believe, fails not because of lack of [technical] competency but because of lack of confidence as a practitioner. And that confidence shows in the lack of [interaction]. [SCDP13]

Successful domestic hosting required the portrayal of familiarity with, and competence in using, the objects within the hosting space (Grier 1988). Likewise, the manner in which clinicians perform sedation- their ability to interact and to engage with the props of sedation such as cannulae, tourniquets, dental instruments etc., conveys a message to patients about their competence. Like empathy it is more than an inherent trait. It is a *projected* competence which comes across as confident and relaxed and is consequentially transferred to patients.

If you're constantly (makes pathetic dithering sound), it makes people nervous anyway. If you're [coming across as] anxious and apprehensive yourself before you've even got started with an anxious and apprehensive patient, they're just going to think "what on earth is going on here? This is not a pleasant experience at all". I think you've just got to be structured and confident and well prepared. [SCDP2]

When I reflect on situations where I have felt frightened and I have had somebody helping me, what were the qualities of the people that were helping me that I thought "that is really good, this makes me feel assured, I am still frightened but I feel that I am confident enough to approach that"?.. You know the sound of the voice of the pilot coming on the intercom when they tell you you are going to go through some turbulence, you know there are ways of phrasing things which for me work and so on and so forth...[You] don't want somebody who is running around like a headless chicken, who is getting panicked...whose heart is racing and looks like they are concerned, they have got to be relaxed. Everything is going to be ok, you know there is a reassurance about it but of course that can't just be simple rhetoric there has got to be substance behind it as well and that is kind of what we try to do, to give to the patient. [SCDP11]

SCDPs seek to project an air of confidence and decisiveness in order to reassure patients. Like any actor, by being '*structured and confident and well prepared*' (p. 182) they are able to deliver a successful performance (McGaw et al. 2011). Giddens also discusses such '*face-work*' (Giddens 1990; Goffman 1967) by using the illustration of air travel. Normality and calmness are important where risk is

invisible, and as the access point of the abstract system of air travel, air stewards' calm demeanour during turbulence reassures the 'trusting' and ignorant passengers that everything is going to be ok despite their perceived experience. This projected demeanour is able to overcome the impact of fallibilities such as changes in air pressure outside the cabin. Likewise a confident and calm clinician can also give off the message that everything is going to be ok despite patients' anxiety-influenced perceptions. This involves the proactive management of the situation so that clinicians are perceived as proficient, and begins from the very first assessment appointment. Encouraging trust depends on establishing an image that is non-threatening. The use of sedation is more than a mechanical technique and depends very much on interpersonal skills:

I think that people who come across as quite calm, relatively quietly spoken and perceiving their anxieties I think are often the best sedationists. They recognise the need that sedation isn't just a question of putting a drug in, waiting for it to take effect and then carrying on with the treatment, I think that good sedationists help the sedation along by the way that they talk to their patients and react with their patients and I think that those are the people that make the best and are more successful. [SCDP12]

The performance of dental treatment augmented by sedation is a literal 'performance' for patients, involving a set, props and projected characters.

5.5 Conclusion

This chapter has examined the performance of treatment with sedation. It has shown how sedation provision is a performance in the theatrical as well as the logistical sense of the word, involving both the 'set' of SCSCs as well as the 'persona' presented through sedation provision. Clinicians discuss the setting of sedation as a space upon which '*you want to be able to project...this feeling of serenity...[and] create this ambience*' [SCDP11] (p. 146), but which has the potential to convey negative perceptions and which is managed through the use of

props. In addition to the 'stage' of SCSCs, the work undertaken involves clinicians trying to portray themselves as caring, confident and competent during treatment. This portrayal is a form of invisible emotional labour which comes at a cost. It involves the prevention of emotional contagion both from and to patients, and therefore places clinicians at a risk of burnout.

Having examined the 'front-stage' performance of sedation, in the next two chapters I discuss the back-stage work to facilitate the performance through the adaptable use of sedation technology and the management of risks.

Chapter Six – Adapting Use

6.1 Introduction

The previous chapter explored the front-stage presentation of sedation when hosting patients within SCSCs. This chapter explores the ‘back-stage’ work of using sedation technology which is required to facilitate such a performance. The reliance of SCSCs upon the tool of sedation technology to successfully execute tasks provides an opportunity to examine the work undertaken within biomedical settings to align tools and jobs. The first two sections of the chapter examine social science concepts pertinent to the chapter. These are then applied in the subsequent two sections to the analysis of sedation provision. The chapter examines sedation’s role as ‘the right tool for the job’ (Clarke and Fujimura 1992a, b) and the claims made by SCDPs about its mundane and ordinary status before discussing the unseen articulation work that successful sedation use requires in order to make it ‘right’.

6.2 Articulation Work

Articulation work is a form of activity undertaken to socially organise medical work (Strauss *et al.* 1985 [1997]), and is the invisible, unacknowledged and arduous work of manipulating medical technology⁷⁷ so that jobs can be successfully accomplished (Clarke and Fujimura 1992a; Fujimura 1987; Strauss 1988; Strauss *et al.* 1985 [1997]). Successful biomedical treatment can be impeded by a variety of contingencies, including the development of the treated condition, resources,

⁷⁷ Here I mean medical technology in its widest sense, as the instruments, medicines and techniques used to provide medical care, and the systems that employ them (Gabe *et al.* 2004).

patients, technologies, organisational structures, other 'interaction work'⁷⁸ required to organise medical treatment, and differences of opinion about work to be done (Strauss *et al.* 1985 [1997], p153-155). Articulation work seeks to ameliorate and negate the effect of these events on the overall trajectory. One use of articulation work is the adaptation of technologies to become 'the right tool' for the job for which they are required (Pfeffer 2009).

6.3 The Right Tool for the Job

People rely upon technologies and tools⁷⁹ to help them undertake work. Such technologies may be classification and modelling techniques, such as those for disease progress or cancer (Bickerstaff and Simmons 2004; Casper and Clarke 1998; Fosket 2004); or physical materials and techniques for their use, such as stem cells, in-vitro fertilisation, manometers, toxicogenomics, and latex products (Holmes 1992; Moore 1997; Pfeffer 2009; Shostak 2005; Strickler 1992). Despite the inverse relationship between technology familiarity and enchantment (Collins 1984 [1992]), the use of established tools⁸⁰ is often discussed by those employing them as an unproblematic value-less exercise, where tools have no inherent meaning or significance but merely facilitate a required job (Moore 1997). However far from being neutral, tools are political and embody choices made about their use and design which are a consequence of social values (Bickerstaff and Simmons 2004; Clarke and Fujimura 1992a; Clarke and Star 2007; Star 1989a).

Technologies can have multiple meanings depending on their users (Fox 2011). Such interpretations are affected by users' underlying views of the process the

⁷⁸ Work that involves social interactions. This phrase is used to avoid the use of the confusing term 'social work'.

⁷⁹ Though not defined by Clarke and Fujimura (1992a), by inference from included chapters, a 'tool' encompasses a wide range of properties, and is a conceptual or physical '*device or implement... used to carry out a particular function*' (OED 2009).

⁸⁰ As opposed to innovations.

technology is intended to facilitate, and differences of belief about both the technology and the process it aids can lead to conflicts over a technology's use (Fox 2011; Strickler 1992). The identification of a tool as 'right' for a particular job is as much a matter of choice, as it is due to some perceived characteristic of 'fit'. Rather than being 'right' for a particular job due to intrinsic properties, both 'tools' and 'jobs' (and the claims made about their relationship) are socially co-constructed through interactions, negotiations, and work (Clarke and Fujimura 1992b; Greisemer 1992). This interplay between tools and jobs is influenced by the culture and history within which they are situated (Fosket 2004; Fox 2011).

Tools and technologies become 'right for the job' through a mutually adaptive mechanism. Tools are made to be 'right' either by changing the definition of 'the job' (Fujimura 1987) or by building a job out of a '*generatively entrenched*' (Greisemer 1992, p. 52) tool. After the initial use of such tools, their further employment is based upon their acceptance as a subsequent 'gold standard' which further work is measured against or based upon. Gradually their use forms a cornerstone of the whole work concept, becoming invisible and unquestioned by users and commissioners (Fosket 2004). In addition to tools generating jobs, users adapt them to fit the job they are needed for (Casper and Clarke 1998; Fosket 2004; Holmes 1992; Pfeffer 2009), or 'work-around' aspects of them by abandoning or intentionally using them in a way which is not officially recommended in order to achieve a desired solution (Fujimura 1987; Gasser 1986).

This mutual adaptation between jobs and tools creates 'do-able' jobs and problems, where individuals' work aligns various levels of work from the local and specific micro-level, to the general organisational social world level (Fujimura 1987). Crafting (the use of tacit skills and knowledge), tinkering (opportunistic adaptation of technologies and techniques) and *ad hoc* arrangements (to manipulate a

technology's use) are undertaken in order to work around contingencies, and standardisation is introduced to stabilise the situation that the work is undertaken in (Casper and Clarke 1998; Clarke and Fujimura 1992b; Fujimura 1987).

Although Strauss *et al.* (1985 [1997]) rejected the universal application of the types of work they identified to other clinical settings, none-the-less their analysis of the social organisation of medical work is useful for understanding some of the processes undertaken within SCSCs. The provision of sedation to enable dental treatment does not require patients to stay for long periods of time as an 'in-patient', but each appointment *does* contain within it a micro-trajectory for that particular session, as well as fit within a bigger trajectory of the total treatment plan. As a clinic which relies upon a medical technology⁸¹, SCSCs' requirements of work to make sedation 'the right tool for the job' were reflected in the data.

6.4 Sedation Technology- Just a Tool?

Sedation forms part of dentists' methods for 'pain and anxiety control' (GDC 2001; Meechan *et al.* 1998) and like local anaesthesia occurs through the use of medical technologies⁸². The inclusion of the mechanical means of managing both anxiety and pain within one concept occurs because of their mutual influence (pain causes fear whilst fear affects pain perception) and their role within dentistry. *'[W]hen we think or speak of dentistry we think and speak of pain, fear and apprehension'* (Nettleton 1992, p. 64), yet despite being *'perceived [by both patients and clinicians] to be central issues for satisfactory dental practice'* (p. 77), pain and fear are not the

⁸¹ To the extent that it is named after it- oral surgery clinics are not called the 'forceps clinic'.

⁸² The provision of pain management usually requires an injection, which uses a needle, a cartridge of local anaesthetic and a syringe (Meechan *et al.* 1998). Sedation uses a range of technologies including the facilities, assessment and monitoring equipment, drugs and devices for their delivery, medical emergency equipment and methods of drug management (SAAD 2009).

main focus of dentistry⁸³. They are managed in order to create the conditions necessary to provide successful dental treatment. As such, sedation's facilitating nature contributes to its representation as an unproblematic technology unworthy of attention.

I look upon sedation a bit like people might look on local anaesthesia, it is a tool. It is a great tool, it is an effective tool, but that is all it is. [SCDP11]

[S]edation is a very useful tool. I don't think that it is quite as useful a tool as local anaesthesia because we couldn't do dentistry without local anaesthesia. I think that where local anaesthesia is the windscreen, sedation is the windscreen wipers. You don't need it all the time but when you do need it, you really need it! [SCDP13]

SCDPs' identification of sedation as *just* a tool without any special significance can be seen as a rhetorical device to remove fear, mystique and status which might otherwise impede its use within primary care, create dependency or threaten its availability as a legitimate treatment option for dentists (see Chapter 7). Such a trope has appeared before in discussion of sedation in the dental literature. Descriptions of sedation as '*but a tool for a job*' (Haigh 1999, p. 3) or '*one tool in the armamentarium*' (Robb and Craig 1999, p. 3) sought to divest it of any mystical power in contemporaneous safety debates by implying that it was something to serve the user and did not have an impact itself on the job being performed. Additionally, like Moore's (1997) paper on sex-workers' use of safer sex technologies, users' emphases on the mundanity of technology as tools for a job demonstrate those social worlds' acceptance and disenchantment with the workings of their everyday world. Sedation is nothing special, it is normal. This is most clearly seen by their comparisons to other everyday technologies such as car parts or cooking pots which aid the completion of another task (driving to a destination and eating a meal). These similes represent technologies as ordinary and simple tools to undertake a job, yet the use of technology is *not* a value-free or unproblematic

⁸³ As opposed to anaesthesia which exists specifically for this reason.

exercise. As well as helping perform tasks, a technology affects the way its users think and act, by constraining their actions within its limitations and their understandings of it⁸⁴. Tools are laden with meaning by their users, communicating embodied information as physical representations of interpreters' underlying theoretical concepts (Fox 2011). These attributed meanings are not necessarily the same for all users (Clarke and Fujimura 1992b). As illustrated earlier, sedation is simultaneously a means to avoid dentistry, engage with dentistry, meet educational requirements, and meet service needs. Discussion of sedation as 'just a tool' fails to take into account its embodied information and its consequences. The design and use of technologies requires choices to be made about what they do, so far from being neutral or 'just a tool' they are political entities (Bickerstaff and Simmons 2004; Clarke and Fujimura 1992a; Star 1989a)⁸⁵. By describing sedation as mundane, its political significance is downplayed⁸⁶.

In addition to inherent social meanings of sedation as a tool, the unproblematic nature of 'just a tool' fails to see the demands that it places upon users. Sedation *is* a tool, but it is a demanding tool, and making it 'the 'right tool for the job' (Clarke and Fujimura 1992a) involves work. The next section examines the articulation work that successful sedation use requires.

6.5 Articulating Sedation

This section explores the ways in which clinicians align the requirements and abilities of sedation in order to overcome the hurdles to successful treatment caused

⁸⁴For example, see Steingarten (2002) regarding the effect of bread-making technology on the transformation of the baguette, or Yee and Bailenson (2007) regarding the effect of avatars' appearance on behaviour in virtual environments.

⁸⁵ For example, see Milsom *et al.* (2008) or Nettleton (1992) for discussion of the use of school screening for dental disease.

⁸⁶ See Chapter Seven pp. 193-200 for a discussion of the boundary work (Gieryn 1983) of sedation provision.

by the patients' anxiety and the limitations of sedation technology. The 'ideal' sedative should be simple and safe to administer; able to remove anxiety and pain; long-lasting enough for treatment but have a quick recovery; free from interactions and side-effects; cheap; and acceptable to both patients and providers (Meechan *et al.* 1998; Ryder and Wright 1988)⁸⁷. Strauss *et al.* (1985 [1997]) demonstrated that clinical treatment requires myriad articulation tasks⁸⁸, and SCDPs reported three main articulating strategies to overcome some of the difference between the ideal and actual sedation- managing the effects of the sedatives; managing patients' escorts; and adapting the tool and the job of dental sedation.

6.5.1 Managing the Sedative Effect

Clinicians' articulation of the pharmacological effects of sedation involved both the immediate management of the sedatives' *effects* to facilitate successful treatment, as well as overcoming their unwanted *side effects*.

6.5.1.1 Augmenting the Sedatives

By describing sedation as a '*tool [like] local anaesthesia*' (p. 167), the difference between the two technologies is ignored. Anaesthetic injections are primarily technical in their demands, as social factors have minimal impact on their success. In contrast, sedation is more socially demanding, requiring good communication skills in order for it to be effective.

I think it's a load of rubbish [equating ideal provision of sedation with that of local anaesthetic]...It is just a tool like your local anaesthetic, but it requires more effort than your local anaesthetic [SCDP7].

⁸⁷ Whether sedation should ideally induce amnesia is debatable, depending on the treatment undertaken and the overall aim of sedation treatment.

⁸⁸ For example, though not discussed in this study, sedation requires someone getting the cannulae, syringes, dental kits, drugs etc. from the stores in order for it to be provided.

I don't think you can just sedate a patient and carry on as if they are fine just because they are sedated, because they are still conscious...if you are not reassuring them that everything is going to be okay, I don't think your patient is going to be very relaxed when it actually comes to doing the treatment. [SCDP9]

[With IV sedation] you use a calm voice, and obviously that keeps the mood...for inhalation sedation you do more of the suggestive language...I think it makes the sedation a lot more profound if you can calm them down. [SCDP6]

In contrast to local anaesthesia, sedation techniques require additional work of 'iatrosedation' (Friedman 1967, 1983), the generation of calmness in patients through clinicians' verbal and non-verbal communication. Indeed interpersonal, rather than technical, competence was seen by staff as evidence of experience and skill.

Sometimes the students who actually have the conscious sedation technique off-pat...they can get the cannula in, or they put the nitrous oxide on, they can do all that, they can administer the drug, they can do the dentistry but actually they can't get the treatment done. So it fails, we have failed sedation. And then somebody more experienced sees the patient, does exactly the same thing, same cannulation, same drug and gets the treatment done. What is the difference? Behaviour management [iatrosedation]. [SCDP13]

An effective sedation technique requires more than having technical skills 'off-pat'. In order to achieve a successful outcome, clinicians need to articulate the treatment. Through iatrosedation they manage patients' emotional responses, aligning them to sedation's chemical effects in order to 'keep the mood' and make it more 'profound'. Although this interactive manner is an essential part of competent sedation, to non-sedationists it may come across as

going for the hippy experience of love and explanation and it's all very flowery [SCDP14].

The portrayal of sedation augmentation as laid-back love and florid language

diminishes and masks the difficulty of the emotional labour involved⁸⁹, and SCDPs were aware that colleagues did not generally understand the demands of sedation provision.

I don't think they realize the complexity of it all, and how demanding it can be, I don't think they realize that. I know they see it as demanding but I think sometimes they just feel the drug is going to do the work, I don't think they see that other – because until maybe you've treated more very anxious patients I don't think you would, or unless you'd seen it or had an interest in it. I think you'd just say "oh they'll sedate you" and that's it, job done. [SCDP5]

This additional, demanding and complex work that sedation clinicians undertake is necessary to make sedation successful. Deleted or overlooked action to make things 'work' is common in representations of science (Star 1992), and is similarly unacknowledged by non-sedationists. In the same way that museum dioramas hide *'the blood and guts of taxidermic work'* (p. 281), the mental image of SCDPs treating a sedated patient fails to show the metaphorical "blood and guts" of sedation work. Whilst colleagues might think that treating anxious patients is 'demanding', this is with regard to the additional pharmacological management which might be perceived as *'a bit medical'* [SCDP8]. Until they have experienced or witnessed what is involved in managing the patient and augmenting the sedative effects, they are unable to comprehend the work required and it remains hidden from them.

The imperceptibility of this interpersonal work is embedded in the accepted UK definition of sedation. The publication of the Poswillo report (1990), which critiqued DGA provision and urged for sedation as an alternative, was a significant moment in the provision of dental sedation within the UK. The document challenged the established definition of 'conscious sedation' proposed by the Wylie report a decade earlier, critiquing its reliance upon pharmacological central nervous suppression and failure to address the underlying anxiety. In contrast, the Poswillo report defined

⁸⁹ See Chapter Five pp. 150-158 for a discussion of emotional labour SCDPs undertake.

sedation as

*A carefully controlled technique in which a single intravenous drug, or a combination of oxygen and nitrous oxide, is **used to reinforce hypnotic suggestion and reassurance** in a way which allows dental treatment to be performed with minimal physiological and psychological stress...*(Poswillo 1990, p. 4 para 2.4, emphasis added).

The report perceived the dentists' manner as the main element of sedation, with chemicals augmenting a calm approach rather than sedation being the main element augmented (if at all) by hypnotic suggestion. A contemporaneous discussion in the British Dental Journal also urged that sedation techniques should rely primarily upon support and suggestion augmented by pharmacological techniques (Allen 1989; 1990; Ryder and Wright 1988; 1989).

However due to concerns about Poswillo's emphasis on the use of a single intravenous drug, the new definition was rejected and Wylie's (1981) lasted as the designation of acceptable 'conscious sedation' within the UK. Poswillo's concept of 'sedation' failed, much as Lister's carbolic spray failed in 19th century medicine (Fox 2011), because of contested embedded meanings. Whilst intending to redress the pharmacological bias inherited from DGA, it did not contain enough flexibility with its strict definition of 'a single intravenous drug', and so was rejected due to another communicated meaning of censure and restriction. Wylie's definition⁹⁰ in contrast enabled a pharmacologically more flexible approach to sedation provision, so it was kept but consequently the 'iatrosedation' aspect was lost. Subsequent reports and 'stance' papers, citing antecedent documents containing the Wylie definition, further entrenched this definition. The pivotal moment of sedation provision within the UK was the publication of *ACD* (DoH 2000), which effectively stopped the use of general anaesthetic for dentistry within primary care settings. As a landmark document, this publication has consequently provided material for subsequent

⁹⁰ See p. 32.

documents⁹¹. Its use of the Wylie definition has ensured that sedation is thus defined in approximately 30 reports or position papers regarding dental sedation provision that have been published over the past two decades. The documents' *'intertextuality'* (Oswick and Robertson 2009, p. 181), allow dominant readings and interests to become embedded. As *'[o]ne of the most highly regulated areas of dentistry'* (Robb 2010) this large collection of documents has consequently 'black-boxed' the understanding of sedation treatment, so that it is *'no longer questioned, examined or viewed as problematic, but...taken for granted'* (Clarke and Fujimura 1992b, pp. 10-11). Instead a focus upon pharmacological sedation and an omission of interactional work has intertextually embedded the invisibility of this work in the process of sedation provision, and discussion of the treating clinician's manner has generally become invisible. Within the three main UK-based text-books of sedation⁹², only Girdler *et al.* (2009) discuss interaction for both inhalation and intravenous sedation, devoting five lines of text to the subject. Meechan *et al.* (1998) discuss suggestive language for inhalation sedation but not for intravenous sedation, and Craig and Skelly (2004) omit any discussion of 'iatrosedation' at all.

6.5.1.2 Providing Memories

In addition to augmenting the effects of sedation at the time, the provision of sedation also requires the management of how patients subsequently encode the experience they have undergone. Patients' dissociated state can encourage them to attend treatment as a liminoid event⁹³ (Turner 1977, 1982) which is experienced without being reflexively considered or leading to subsequent change. This manner of engaging with sedation is problematic if SCDPs perceive patients' rehabilitation to

⁹¹ Typically, documents which discuss sedation define it by referencing ACD (DoH 2000). E.g. 'We support the recommendations set out in the Department of Health (England) publication 'A Conscious Decision' (GDC 2005).

⁹² Other texts do exist, such as Malamed (1995, 2010), but are not considered as they are from different cultural and legislative situations.

⁹³ See Chapter Eight.

general dentistry as the 'job' of SCSCs since they will finish treatment without an altered view of dentistry. In addition midazolam has the side effect of inducing anterograde amnesia, temporarily preventing patients from acquiring long-term memories (Greenblatt 1992; Merritt *et al.* 2005). Consequently patients' experiential knowledge of dentistry also needs managing to overcome this pharmacological impact.

[W]hen the patients leave we give them some feedback, almost [as] the very last thing that happens. You are feeding back to the patient "you did really well", so when they are leaving their memory should be of somebody saying how well they have done. And what should happen at that point, is they know that they have had some treatment because invariably they can still feel the fact they're numb, they have had a filling, [and think] "hey that is brilliant!" [SCDP11].

...before we start the treatment we say that the drugs that you had last time produce amnesia and so you probably think that you were asleep last time but you were not, you were conscious throughout. We are going to use exactly what we did the first time this time. You will be awake as you were the first time. [SCDP13]

This provision of 'memory' seeks to achieve two outcomes. By discussing the previous sedation experience with patients, clinicians seek to articulate subsequent appointments' trajectories by addressing expectations (Strauss *et al.* 1985 [1997]). This information provision attempts to prevent any 'disarticulating' interruption to the flow of work by patients' objections based on an incorrectly interpreted lack of memory. Such articulation is difficult to achieve, as midazolam does not impede meta-cognition (Merritt *et al.* 2005). With functioning short-term memory and semantic retrieval, patients who have midazolam are not aware of its effect on their memory until after the fact, and may consequently discount SCDPs' initial discussions.

I remember being told that there would be a slight loss and you think, "Oh I can't imagine not remembering anything, that's just one of those wild absurd warnings they put on things" but that is true! [Olivia]

After treatment, clinicians aim to instil awareness of a good encounter with dentistry for both inhalation and intravenous patients, to start to re-orientate their perspective by 're-embedding' the '*abstract system*' (Giddens 1990, p. 80) of dentistry into a specific, and more importantly good and successful, experience. The end of an appointment provides an opportunity to demonstrate to patients that they can tolerate treatment, and to give positive feedback. Such discussion seeks to encourage them in acquiring further agency, facilitate its development through reflexivity and thereby reduce feelings of powerless '*existential threat*' (Abrahamsson *et al.* 2002a, p. 191) and external locus of control (Poulton *et al.* 2001).

Both strategies of memory provision may be aimed directly to the patient, but they are also directed to accompanying escorts so that they can continue this articulating work outside the SCSC. Such co-attendees are mandatory if treatment is provided with midazolam⁹⁴. For many patients an escort may still be present during treatment as a form of emotional support, and the presence of this additional person also has the potential to disrupt the sedation trajectory.

6.5.2 Managing Escorts

The presence of an extra person is ambivalent in its potential. If an escort is able to isolate their own feelings about dentistry and enter into a supportive role, their trusted position as a known friend or relative enables them to be helpful, facilitating a more trusting atmosphere and providing positive messages about dentistry which can be relied upon. By taking this stance, escorts help articulate the treatment trajectory (Strauss *et al.* 1985 [1997]). If they are not able to do this, then they have

⁹⁴ Escorts who will take patients home in private transport and supervise them for the remaining day are mandatory for treatment with intravenous midazolam due to its cognitive and motor effects, and advisable at least for the first appointment with nitrous oxide.

the ability to 'disarticulate' treatment, and on such occasions may also need to be managed:

We have [had] their significant partner, their escort actually feeding back to them [how well they did]. As a general rule [though], escorts are invited to go elsewhere...we typically don't like the escort [to be present, though] we have not really had very many problems with patients' escorts who have sat in. Generally speaking they have been very supportive, they don't generally undermine the message that we are giving. I think that most of the escorts understand the role that they are playing. It doesn't always happen, and what we have to do then, in those kinds of situations, is actually try and talk through it [with them]. [SCDP11]

They [escorts] can be a huge help or a huge hindrance...[Some] escorts will actually sort of be a negative effect. They either, when they can see it's going to be a local anaesthetic will grab the patients arm and sort of hold tight, and I think that is obviously an indication to the patient that something is unpleasant that might not be, and that is actually working against you as it almost brings the patient slightly out of sedation. Or if they refuse to keep quiet, which is again something that happened yesterday. As I was trying to get to drop my voice and help the patient into sedation they started talking and asking what I had been doing, and you don't want to look rude to the escort but you are trying to concentrate. And with those patients that I have difficulties with their escorts I try and encourage them the next time to say "how about you wait outside?" and sort of encourage them out. I have known colleagues who won't treat a sedation patient if the escort insists on being in the room. [SCDP12]

The study of paediatric sedation by Averley *et al.* (2008) demonstrated that escorts are aware of their impact on patients. Whilst escorts may facilitate treatment, helping SCDPs cement positive information, they can also disrupt it or 'undermine the message' that the dental appointment was an acceptable experience. This can be either through direct questioning and challenging of what happened in the appointment, or by becoming more obviously 'present' rather than remaining in the background. By squeezing patients' hands during treatment and projecting their own anxieties, or by talking, escorts 'disarticulate' (Strauss *et al.* 1985 [1997]) the sedation trajectory for the dissociated patient or the concentrating clinician by increasing the patient's awareness or disrupting the clinician's focus.

Escorts who stay with patients in the dental clinic may require careful management

(Averley *et al.* 2008). These disarticulations and disruptions to the trajectory of treatment require realigning by SCDPs. Strauss *et al.* (1985 [1997]) noted that in treatment trajectories with many such disarticulations and re-articulations from reactions and new developments, the easiest way to articulate them is to revise or add additional protocols. If these fail, novel approaches are introduced by local 'actors' to facilitate their particular goals and idealised trajectory. Such *ad hoc* actions to create a smooth work trajectory include negotiating differences between clinicians' and escorts' reports of what happened, 'talking it through' in order to arrive at an acceptable explanation of treatment which won't undermine patients' confidence. The risk of multiple disarticulations is that the hassle they create may lead to a withdrawal of care as the job is not 'do-able' (Fujimura 1987). To prevent a total withdrawal of care, the escort is withdrawn from the patient-clinician-escort triad present in the situation. Protocols may be developed which 'as a general rule' lead to their removal 'elsewhere', or individual clinicians may insist on this approach, relying on their authority through the ceremonial order of the clinic (Strong 1979; Strong and Dingwall 2001) to enforce their assertions over the escorts' (or patients') personal preferences.

6.5.3 Treating Flexibly

A fundamental aspect of SCSCs is their inherent flexibility in accommodating patients. As demonstrated in Chapter Four, one facet of this characteristic is their containment of the multiple meanings and agenda of their users. The flexibility of SCSCs extends beyond their interpreted purpose however, to also include the actual work undertaken within them and is comprised of 'interpersonal flexibility' and 'procedural flexibility' tempered by the conditions of provision.

6.5.3.1 Interpersonal Flexibility

SCDPs reported a malleability in both their personal approach and beliefs about practice. A flexible and reflexive approach to patients was reported, which involved a mutually accommodating interaction.

Dentistry tends to attract people who like to fiddle with things, you know like the little mechanics of screwing things into each other and casting things to bits and getting it all to fit together nicely you know smoothly run across each other. You can't do that with the type of patients that we manage, there has to be a certain amount of give and take with them. [SCDP11]

Dentistry requires technical competence and a focus upon the workings of mechanical components. However this work is carried out on patients, and so requires an approach 'not present when the material worked on is [solely] inanimate' (Strauss *et al.* 1985 [1997], pp. xiv-xv). SCDPs sought to engage with patients as individuals, adapting to their specific needs and managing the work required accordingly.

You've got to be adaptive to different circumstances, because it changes all the time because everyone is unique and every fear is unique. [SCDP6]

This recognition that clinicians should adapt to their patients reflects research by Kulich *et al.* (2003), who showed that self-defined 'patient-centred dentists' working with anxious patients adjust their approach depending on the specific situation (p. 178). This approach respects patients' individuality, and such a patient-centred approach was recognised by patients.

[The SCSC] is different from the local dentist. You go up there- all they want is your bloody money out of you. It's a cattle market. [Thomas]

The personal approach that SCDPs take to patients makes them feel like they are the focus of care (rather than another outcome such as treatment completion or revenue). They are treated as people who have a unique impact on the course of

treatment, rather than inanimate 'teeth-on-legs' to be worked upon. Ironically, this personal approach *is* work-related, as it articulates the treatment by '*filling* the gap between medical purposes and their fulfilment' (Strauss *et al.* 1985 [1997], p. 189). It prevents the disruptions and resistance that would occur if SCDPs treated patients in a uniform manner, thereby facilitating a smooth alignment of tasks and completion of treatment. In addition to their relational approach, SCDPs were also malleable in their provision of sedation and the dental treatment carried out afterwards.

6.5.3.2 Procedural Flexibility- Sedation Provision

SCDPs' awareness that a patient's situation '*changes all the time*' [SCDP6] requires that they have a flexible approach to the treatment actually provided. Despite SCDPs' expressed aim of rehabilitating patients into primary care dentistry, this was not perceived as something which could be forced upon patients. Patients are encouraged to consider changing their sedation requirements, but are adapted to by SCDPs regardless of their decision. Such an approach provides sedation based on patient need rather than being protocol driven or once-and-for-all in categorising its use.

[Reducing sedation] is a thing that we normally do in conjunction with the patient, and we might say "next time you come in, you are only having something trivial done, would you like to try that without sedation?", and if they say "no" then it is absolutely fine. What we would normally do though, if we do [try without sedation], is say "well I will tell you what, bring an escort anyway just in case it is a bit to much for you, and then we can sedate you". Flexible, flexible! [SCDP13]

I will say "how did that go for you, were you happy with the way that things went?" ...I would keep making suggestions, "you are only having a scale and polish, how about trying some gas and air instead?" or "next time you need to take this tooth out, I think perhaps based on last time you didn't seem quite so happy, how about we try some intravenous instead?" So I would keep reassessing at each appointment rather than sort of thinking at day 1 to make a plan for day 10... there is nothing made in stone for

appointment 10 from day 1. I would still have an open mind with each appointment. [SCDP12]

In order to make their treatment of patients more tailored to the job-at-hand, SCDPs adapt their approach to individual patients based upon both parties' previous experience and feedback. Treatment plans are not set in stone, requiring a specific sedative all the time. Instead, based on previous appointments and anticipated future procedures, they are flexibly managed in order to provide the right amount of anxiety management for each aspect of the treatment plan. By balancing treatment demands against patients' previous responses, SCDPs flexibly manage the sedation provided so that treatment can be successfully performed. In addition to this big picture flexible management of whole treatment plans, there is a micro-flexibility within each individual appointment, with sedation changing depending on experience. Whilst a patient may decide to change the sedation treatment they are receiving, they are not constrained by that choice. Changes are made with safety nets should they turn out to be unacceptable. Patients who reduce sedation are initially encouraged to set up the social structures that have previously supported them when they had sedation previously. Should dental treatment with a different level of sedation prove to be too much, patients and SCDPs can then flexibly change the approach to dental treatment and provide the required anxiolysis within the same appointment.

By flexibly changing sedation provision, SCDPs articulate three trajectories. The appointment and treatment plan trajectories are both facilitated by ensuring the correct level of sedation is provided to allow successful treatment. This is achieved through negotiation, adaptation (should a change not be possible) and ensuring sympathetic conditions for such flexibility⁹⁵. In addition, a trajectory towards

⁹⁵ Such as ensuring that escorts are brought by patients attempting to have treatment without IV midazolam just in case they still require it.

rehabilitation is articulated by SCDPs' *'[n]egotiation, persuasion, discussion, and teaching'* (Strauss *et al.* 1985 [1997], p. 189) of patients, to encourage them towards autonomy⁹⁶.

6.5.3.3 Procedural Flexibility- Dental Care

Flexibility of sedation provision responds to both patients' emotional and dental needs. Another form of flexibility that SCDPs demonstrate is their adaptation of the 'job' that the tool they use is required for (Fujimura 1987). The constraints of sedation technologies impact upon SCDPs' abilities to provide specific dental treatment as dissociated patients are unable to actively participate in treatment, thereby limiting certain aspects of care which require cooperation. The need to have sedation therefore simplifies some of the treatment that is available.

you can't necessarily do what you'd ideally like to do on a patient who doesn't need sedation – it would be lovely to say we could, but I think we've got to be realistic as well and it just doesn't always happen... if they didn't need sedation, obviously sometimes you can get more done, save more teeth possibly, because of cooperation and things. [SCDP6]

By using a specific technology, potential actions are consequently constrained. SCDPs therefore adjust treatment trajectories, adapting (and simplifying) specific dental tasks within the limitations sedation imposes, in order to enable a successful outcome. This limitation imposed by sedation's use was acknowledged by referring clinicians.

Just because someone is having sedation I wouldn't expect that you would not treat them in the same way [as an unsedated patient]. I would expect them to be offered the same sort of treatment that is reasonable, and that they can cope and manage with. I suppose the fact that they are having sedation means that they are possibly slightly more difficult to treat, and so that may restrict your treatment planning, but otherwise whatever you are providing should be to the best of your ability. [PCDP6]

⁹⁶ See Chapter Seven for discussion of this 'generous constraint' (Gomart 2002).

PCDP6 expresses ambivalence about the treatment that patients receive within SCSCs, expecting the same sort of treatment as un-sedated patients whilst also recognising it has to be reasonable, tolerable and restricted. Such conflicting demands demonstrate an uncertainty about what can be reasonably expected other than a moral demand that work is done to the 'best of [one's] ability'. Where this was not perceived to be the case, the impact of sedation upon treatment provided was occasionally criticised.

I've seen some cons⁹⁷ and stuff done under IV sedation, and my feeling when it was being done, is that the treatment was rapid, rushed, in the hands of somebody who probably isn't up to speed in doing things super-efficiently, like a general practitioner is. It was kind of a staff grade in one of the hospitals in [a city] who was doing a bit of [restorative dentistry] with the patient under IV sedation. I thought "well actually, you are belting through this so that you can get them back out of the sedation"...So my only worry is whether it becomes, not so much with the nitrous, but with IV – it becomes rushed so that you can get them out of the IV sedation. [PCDP7]

Compared to DGA, which continued until the anaesthetist reversed it, the limited period of sedation from a dose of intravenous midazolam means that there is a pressure to complete treatment within a window of available time. As a primary care dentist used to 'doing things super-efficiently', PCDP7 reports a belief that some SCDPs are unable to undertake quality treatment efficiently without it being 'rapid and rushed'. This may be seen as a rhetorical foil which accounts for difference by comparing speed and quality between primary and secondary care provision (Gieryn 1983). However efficiency was also perceived by SCDPs as an essential aspect of an 'ideal sedationist':

I think you need to be a confident sort of person as well. I think if you're a bit wishy-washy then you're not going to cut the mustard really. Or at least do it well...I think you've just got to be structured and confident and well prepared. [SCDP2]

⁹⁷ Fillings.

Inefficient, unstructured approaches do not achieve either sufficient sedation or completed dental treatment. Rather than divorcing good dental treatment from the situation it is provided in, the conditions and limitations of treatment with sedation were seen by clinicians as part of the situation which redefined what 'to the best of [one's] ability' meant, making it flexibly interpretable.

I think that you've got to look at the bigger picture when you provide the sedation, that optimum is not always possible, you've got to be prepared to compromise slightly on certain aspects of your treatment...I guess that's with a lot of things in dentistry, what you do in the mouth is not always the most important thing – how the patient receives you, as long as you are caring, compassionate and gentle, that is more important to a patient rather than how good your margins are on your crowns, and your clinical skills are not necessarily what is important to the patient. [SCDP10]

we do do things that perhaps are not in textbooks, you know we make it up as we go along to suit that patient. We patch fillings; we do all manner of stuff that we feel is appropriate for that patient. We are treating the patient not the tooth. All dental courses talk about the importance of treating the patient, and then the next thing they are talking about cavo-surface line angles! I would rather have second rate dentistry but a patient who wants to come back, than first rate dentistry and a patient so anxious that they never want to be seen by a dentist again. I would personally rather have that...we do the best dentistry we can, but sometimes it is compromised. [SCDP13]

'Optimum' dentistry from a dentist-centred perspective is not possible. The 'best dentistry' may actually be 'second rate' clinically, but it does not adversely affect patients psychologically. Treatment within SCSCs is truly holistic and patient centred, taking into account the impact of everything that is done for patients. This compromise echoes findings reported by other 'patient centred' and 'special care dentists' (Kulich *et al.* 2003; Scambler *et al.* 2011). Subjective decisions are made about treatment, which are not visible in the objective discussions about ideal dental treatment found in textbooks.

6.6 Conclusion: Just a Tool or the Right Tool for the Job?

Chapter Four demonstrated that the 'job' of SCSCs is perceived differently by those engaging with it. This chapter has discussed the process of using sedation within SCSCs to complete the 'job' of successful treatment. Although portrayed as just 'a tool' by SCDPs, sedation's use is neither value-free nor unproblematic. Rather than fitting a task smoothly as 'the right tool for the job', sedation has an impact upon, and is affected by, the jobs it is involved in. Sedation's 'rightness' is not an inherent property, but is produced through work to adapt the tool, the job and what qualifies as 'right' (Clarke and Fujimura 1992b; Clarke and Star 2003). It requires SCDPs to 'tinker' with the technology and engage in flexible 'work-arounds' (Fujimura 1987; Gasser 1986). This 'articulation work' (Strauss 1988; Strauss *et al.* 1985 [1997]) that clinicians perform, of augmenting the pharmacological effect of sedation, providing memories, managing escorts and treating patients flexibly, is part of the process of making sedation treatment 'do-able' (Clarke and Fujimura 1992b; Fujimura 1987). Such work is generally unseen, and this invisibility is embodied by the use of the Wylie definition (1981). Through the 'intertextual' (Oswick and Robertson 2009) use of this definition, it became standardised and 'black-boxed'- '*no longer questioned, examined or viewed as problematic, but...taken for granted*' (Clarke and Fujimura 1992b, pp. 10-11). As a consequence the interpersonal work of sedation provision was made invisible.

The approach required to successfully provide sedation affects how SCDPs' work is perceived by colleagues. The importance of perception reflects the previous chapter's discussion that the performance of sedation is a literal 'performance' to an audience, where attitudes and personal orientations of treating clinicians are known by patients due to their outward expression. In the next chapter I continue to explore the back-stage work required to successfully 'perform' sedation treatment, by

looking at the risk management required to overcome or prevent untoward contingencies.

Chapter Seven - Managing Risk

7.1 Introduction

This chapter discusses the risks of treatment within SCSCs and the 'back-stage' work of managing these risks in order to minimise their effects. By risk I am principally referring to *'the hazards of medical intervention'* (Strauss *et al.* 1985 [1997], p. 70) rather than the general chance of avoiding or controlling danger discussed by Giddens (1999, pp. 3-4). The previous two chapters examined the use of sedation technology within SCSCs, and the theatrical 'performance' of sedation treatment using this technology. As both chapters demonstrated, the analysis of technology involves both physical and social aspects, the risks of which are discussed here. Like any drama, successfully performing a medical scene is pregnant with potential mishaps and 'disarticulations' (Strauss *et al.* 1985 [1997]). The unsuccessful management of sets, props and personal fronts (Goffman 1959 [1990]) can lead to unintended responses from audiences or breaks in their belief in the actors. People can 'die' on stage, or indeed in real life⁹⁸, and actors' positions in the cast can be under threat from others eager to take their role. The clinical 'performance' of sedation is no different, containing physical, professional, enactment and outcome risks, the management of which is part of the 'back-stage' work required to make such occasions successful.

In order to discuss the techno-social risks of sedation, the chapter layout reflects the preceding chapters' attention to each facet by artificially separating the sedation technology from the SCSC social environment it is used within. The first section therefore examines the reported management of the physical risks of sedation

⁹⁸ For example Brandon Lee's death whilst filming the cult movie 'The Crow' (IMDb 2011).

technology to patients, before exploring how the control of these risks is related to the risk to SCDPs' professional 'ownership' of sedation, and consequently to maintaining a form of social order. Following this I turn my attention to the risks associated with the process of sedation provision, which are aspects of SCSCs' identity as clinical 'boundary organisations' (Guston 1999, 2001), namely the risk to patients of adverse selection and the risk to SCDPs of moral hazard. By laying the chapter out in this fashion, the object at risk alternates between patients and SCDPs.

7.2 Managing the Risk of Sedation Technology

This section examines three sources of hazard identified by Strauss *et al.* (1985 [1997]), '*the drugs, machines [and] procedures*' (p. 92) of sedation use. Rather than considering them as separate entities, the collective physical risk of these elements is considered before I examine the wider professional motivations and implications that are symbolically represented by this work. Both types of risk contain within them a danger of breached categories- patients with unclassifiable medical or conscious states. Such difficult to pigeon-hole patients become '*matter out of place*' (Douglas 1966 [2002], p. 44) thereby threatening social order. The work undertaken within SCSCs therefore seeks not only to maintain the physical and professional integrity of patients and sedationists respectively, but to remove an underlying symbolic danger of 'impure' situations.

7.2.1 The Physical Risk of Sedation Treatment

Sedation techniques use drugs and technology, both of which contain physical risks that must be managed. Strauss *et al.* (1985 [1997]) identified 'safety work' as a significant part of the social organisation of medical work, noting that '*[b]ecause the*

raison d'être of hospitals is to give medical care, a substantial proportion of their staff are involved with issues of clinical safety' (p. 69). Safety work is the work undertaken to prevent, assess, monitor and rectify risk, and these aspects were demonstrated in the data.

To prevent the physical risk of sedation technology to patients, they must be assessed to ensure they are safely treatable. The threat to personal safety that some anxious patients feel (Abrahamsson *et al.* 2002a) is in some respects not an irrational fear at all⁹⁹, but a realistic awareness of their tentative 'ontological security' (Giddens 1990, pp. 92-94). Dentistry is dangerous, involving sharp instruments and the potential to cause pain as well as local anaesthetic solutions which affect the nervous system. Sedation has the potential to increase this danger as it introduces further chemical agents which interact with patients' bodies. Whilst it can reduce medical dangers by lowering the stress that might potentially exacerbate medical crises, this risk-reduction is only on the proviso that the sedation itself is provided safely. Clinical assessments, such as verbally checking that patients' reported medical histories are accurately recorded and physically checking their blood pressure, seek to prevent future problems during treatment by ensuring patients are safe enough to treat in the first place. In some ways this is an actuarial process undertaken as part of the assessment of '*external risk*' (Giddens 1999, p. 4) - events common enough to assess based on evidence. By comparing gathered information with medical guidelines, decisions are made regarding the predicted safety of treating individual patients. For example, by measuring a patient's blood pressure and taking into account the ability of their current medical treatment to control it, they are placed within a category of health risk which determines whether sedation is a safe treatment for them that day (Girdler *et al.* 2009). Such assessments are not

⁹⁹ One reason why using the term 'phobia', which is defined as 'irrational', to describe dental anxiety might be called into question.

performed as a once-and-for-all procedure at the start of a treatment plan, but are situation (i.e. both patient and time) specific and therefore open to contingencies.

there are a lot of clinics who say “oh this patient has got a cough, or they have got this or they have got that, or they have got high blood pressure, or they are taking these tablets”. You know we treat all these patients but we look at each individual case, so we treat and assess, I suppose this is the cornerstone of it, we assess each patient individually when they first come and then on each occasion when they are actually sedated. [SCDP13]

I was getting worked up, and when I went in there my blood pressure was up. As soon as I sat in that chair and the nurses talked to me and cooled me down, and took my blood pressure twice – it had gone from 180 or whatever, it had gone right down low – it is only because I was in there and I was calmed down by the nurses, my blood pressure went straight down it did. [Thomas]

Although these reports of individually tailored assessment might be viewed as accounts of the types of expected behaviours and procedures undertaken during the ritual or ceremony of the clinic (Strong 1979; Strong and Dingwall 2001), and therefore forms of the ‘liturgy of the clinic’ (Atkinson 1995), they also illustrate the *actual* safety work of SCSCs. A variety of work is undertaken by the nurses described by Thomas (such as taking blood pressure, talking to him, cooling and calming him down). He illustrates the processes of clarifying and categorisation that constitute the safety work of the clinic. His blood pressure was high initially, but was it too high? Was it permanently high? Any deviations from ‘ideal’ require further clarification. By determining whether they are either too great or are insignificant deviations, patients can consequently be classified as safe to treat or not. On the face of it such assessments are ‘common sense’ parts of good technique which reduce the actual physical danger of untoward medical events, but such categorisation also helps to create social order by reducing the symbolic danger of ‘*matter out of place*’ (Douglas 1966 [2002], p. 44) that ambiguous patients represent. By repeating Thomas’ blood pressure once calm, the ambiguity of whether he was medically unsafe or just ‘het-up’ was resolved- his blood pressure dropped, and treatment proceeded. This approach reflects that reported by

SCDP13, who does treat patients who are seen by other clinicians as medically risky, but assesses them first, during which vague reports ('a cough', 'taking tablets') are clarified. As well as seeking to prevent medical risk, assessment does not stop at pre-clinical checks but is a continuing process throughout each appointment which monitors patients for ongoing medical risks as they are treated¹⁰⁰:

Everyone's watching the patient. The patient's getting the best care that they can have. [SCDP1]

[Y]ou need to be aware that there is a possibility that something could go wrong and I think that a good sedationist will always have that. Somewhere, maybe not right in front of their mind but it will be there and again that is what makes it safe isn't it? We have got everything going on; we have got the right trained nurses; we have got the right electronic gismos to tell us what the oxygen saturation is and things like that. We are used to watching what is happening, we know what the drug is going to do, we can almost visualise what is happening to the physiology of the patient, so we, so you are watching for things. [SCDP11]

This back-stage work of risk management through surveillance, which is conducted during a performance aimed at reassurance, is reflected in Scamell's (2011) ethnography of midwifery. Midwives identified a 'swan effect' embodying the tensions between the ideal image they portrayed and the surveillance activity they undertook. Whilst accounts of visual surveillance and monitoring by 'electronic gismos' might be expected from clinicians presenting themselves as safe and competent, the importance of monitoring to actual clinical practice is also reflected in the prescriptive sedation literature. Guidelines regarding patients' American Society of Anaesthesiologists (ASA) classification help define potential risk from their background medical status, and clinical guidelines regarding monitorable signs such as minimum oxygen saturation levels or physical appearance ensure that initial safety is maintained (Craig and Skelly 2004; Girdler *et al.* 2009; Meechan *et al.* 1998). Despite this, patients' idiosyncrasies can still affect treatment. 'Good

¹⁰⁰ Strauss *et al.* (1985 [1997], pp. 88-92) note that although assessment and monitoring are conflated by healthcare workers, they actually differ- assessment being the estimation and evaluation of risk, whilst monitoring is the tracking of risk indicators in order to prevent things going awry.

sedationists' should be aware of the potential for complications to arise, and to be prepared for eventualities as

every time you get complacent or you think you are getting complacent, something can jog you out of it. And there's – the range of reactions, patients can always do something to surprise you! [SCDP7]

Although sedation provision relies on the use of 'electronic gismos' such as pulse-oximeters to check that patients' signs are within a range of safety, monitoring is first and foremost an activity undertaken by treating SCDPs, watching to ensure treatment is safe. Treatment of patients with sedation requires SCDPs to attend to both the mouth they are treating, and the patient as a whole. In addition to ensuring that patients are safe to treat (i.e. the *object* of sedation work is safe), this monitoring of cause and effect ensures the treatment itself is carried out safely (i.e. the *technical process* of sedation work is safe). The safe provision of sedation requires careful incremental provision, gradually adding sedation until, like goldilocks' chosen porridge, the amount of sedation achieved is 'just right' (NPSA 2008). The definition of the 'right amount' is based upon subjective signs such as patients' uncoordinated movement and volte-face with regards to accepting suggestions of dental treatment (Craig and Skelly 2004; Girdler *et al.* 2009). Sedation cannot be set at a universal amount for everybody, but needs to be balanced between the Scylla and Charybdis of over or under sedation- sedated enough to allow treatment, but not so much as to remove consciousness:

we administer sedation to an end point which is going to make the treatment possible and as pleasant as possible for anybody. We do not over sedate patients because we are titrating it but nor do we under sedate them... the safety margin associated particularly with midazolam and nitrous oxide is huge. And we have done something like 60,000 cases we have never had a patient accidentally anaesthetised. [SCDP13]

The patient and appointment specific nature of successfully titrating sedation prevents sedation practice from becoming a rigid technical activity with learnable

rules, and instead ensures a high level of 'indetermination'- the rule-less abstract qualities of an apprenticed craft (Jamous and Peloille 1970). The definition of appropriately 'sedated' is important in the safe provision of sedation for more than the patients' well-being. As the previous quote demonstrates, an alternative to 'sedated' is 'anaesthetised'. By anaesthetising patients, dentists would not only be placing them in physical danger, they would also be undertaking an activity which was removed from their control and placed within that of anaesthetists following some adverse events (DoH 2000). Sedation therefore carries not only physical risks, but also potential professional risks as a consequence of their failed management.

7.2.2 The Professional Risk of Sedation Treatment

As well as a potential physical risk to patients, the use of sedation technology also has a social risk to the staff using it of affecting their professional identities and 'rights'. As discussed previously, the UK definition of sedation emphasises the conscious state of sedated patients (GDC 2001). The importance of differentiating *conscious* sedation from *unconscious* anaesthesia is more than one of reducing the physical risk of morbidity and mortality to patients however. Sedation exists in the hinterland of dentistry and medicine. It has historically been a contested area between dentists and anaesthetists, with disagreement about dentists' legitimacy in providing such treatment (Shearer *et al.* 2004). Physical risk management is not an altruistic activity undertaken solely for the patients' benefit. By reducing patients' physical risk, SCDPs also reduce the professional risk posed to them by this competing social world further reducing the boundaries of their legitimate practice.

7.2.2.1 The Boundary Work of Sedation Provision

Where activities take place in a 'fuzzy' (Jasanoff 1987, p. 211) zone between different social worlds, the boundary between them, and where in each world activities should be placed, becomes contested. 'Boundary work' (Gieryn 1983) is the set of activities that a social world undertakes to define itself as distinct and separate from other social worlds. It is used by professions when they seek to expand their domain of expertise into an area already 'claimed' by another, when they seek to monopolise resources and / or when they seek to defend their autonomy against such encroachments into their 'territory'. The boundary work of SCDPs was demonstrated during participants' discussions of sedation's safety.

I think that there is a misunderstanding about what we do and this goes back a very very long way to the turn of the [20th] century. I have a book at home about general anaesthesia- 1900 I think, and the last chapter in there is entitled "Whose Finger on the Plunger- should it be the dentist or the doctor?" And anaesthesia is a new speciality, it is a relatively new speciality and new specialities are always very jealous of their borders. It is like new countries, and I think that this, I think anaesthetists, I mean there is a big history of feuding between anaesthetists and dentists about anaesthesia but anaesthetists, some anaesthetists anyway have the view that this is really part of their practice and it isn't something that dentists should be doing because they don't have a medical degree, and they are not as clever and not as bright, and essentially untrainable. Now that is an extreme view but I have heard that put forward. [SCDP13]

Dental surgeons are the best people at giving sedation, absolute 100%. I have seen [medical specialists] give sedation, I have seen anaesthetists give sedation, I have seen dentists give sedation. Dentists win hands down, 100% so much better because they are interacting with the patient and it makes it safe... Dentists are much better at it and that is why we need to make sure that the dental profession polices this. You know I think that we are in a position to be able to do it and which profession has got the education sorted out best? The dentists!...We have now got this piece of armamentarium in our bag, so to speak. We need to keep it safe because we need to ensure that we can police ourselves as a profession. We don't want, in my opinion, a situation where we have possibly other professional bodies telling us what we have to do, how we should do it, the types of patients we should do. I actually believe as a profession we police ourselves well, I think that we have educated ourselves well and I think that we provide sedation in a safe, efficient manner. So safety is paramount, from that point of view. [SCDP11]

The discussion about sedation ownership highlights a contested boundary between medicine and dentistry. When different professions perform related work, members may feel suspicious of the other profession's ethics and ability to do 'their' work, seeking to control how or whether such activity is undertaken (Freidson 1970). As Gieryn (1983) notes, the rhetorical activity involved is similar to contrasting against a 'foil', discussing '*rivals in a way flattering to the ideologist's side*' (p. 791). Whilst not overtly '*defining [others] as outsiders with labels such as "pseudo" "deviant," or "amateur"*' (p. 791), these are the implications of protagonists in both quotes. Each 'side' is reported as viewing the practice of the other party as deficient and therefore dangerous, whilst they themselves are safe and appropriately trained. SCDP13 describes that anaesthetists sometimes define their expertise in contrast to the deficiencies of dentists¹⁰¹. From an alleged anaesthetic perspective, SCDPs are acting as amateur or pseudo-anaesthetists who are not medically trained and perceived as less academically proficient¹⁰². From this viewpoint dental sedation practice is understandably rejected. Ironically, this view is based upon a misunderstanding of what SCDPs do, thereby betraying the anaesthetists' rather than dentists' ignorance of actual sedation practice. In contrast, SCDP11 compares the way medics give sedation and the way dentists give sedation from a dental perspective. Based on their experience, dentists are not the inferior and ignorant pseudo-providers, but are better and safer due to their fundamental approach being more interactive with their patients, and through them having a better training program in place (i.e. being *less* ignorant than medics). These discussions reflect

¹⁰¹ Care needs to be taken with this account of anaesthetists' views, as they are not the *actual* views of speaking anaesthetists, but a report provided by someone engaging in boundary work of their own.

¹⁰² The medical portrayal of dentists as 'failed' doctors who didn't get the A' Level grades is long running, and beyond the scope of this study. Such rhetoric is overtly demonstrated in medical undergraduate plays, and may be part of the developed 'habitus' (Bourdieu, 1977) of medical practice. As an illustration, at a lunch with my brother-in-law and a mutual friend (both GPs), my brother-in-law turned to our friend and asked "What do we think about a dentist trying to get a PhD? Do we think he is trying to compensate for something?" to much laughter from both.

rhetorical devices also used in the dental and anaesthetic literature. In a critical editorial discussing the shortcomings of alternative sedation techniques for dentistry, Strunin (2007) criticises the DSTG for publishing conference case reports as endorsement. He warns sedation providers not to *'perpetuate the magical belief'* (p. 647) that sedation is without risk and implies that alternative techniques are given for financial reasons. In reply, the then-president of the DSTG cited guidelines developed by a working party under the chairmanship of the Royal College of Anaesthetists (UK Academy of Medical Royal Colleges and Faculties 2001) to make his response, thereby justifying his position with borrowed authority from the anaesthetic world. After attempting to reassure anaesthetists that sedation was not viewed by dentists as being risk-free, he emphasised the report's message that *'the dental profession had been much more effective in producing and following appropriate guidelines on sedation techniques than had medicine in general'* (Coulthard 2007, p. 1185). By doing so, he countered unflattering amateur images of dental sedationists, emphasising the professions' comparatively better attitude and ability backed up by an officially sanctioned report.

The aim of both worlds' rhetoric is to maintain ownership of sedation as a resource. SCDP13's use of the country analogy clearly acknowledges that the discussion is about borders. Due to its relatively new status as a speciality, anaesthesia is viewed as insecurely and jealously trying to establish itself and fight for its 'place in the sun' by elbowing dentistry aside. This need to assert legitimate ownership reiterates assertions of dentistry's need to maintain ownership, which were expressed in the literature after the GDC's decision to remove DGA from dentists' treatment options (Seward 1998). In order to maintain ownership and self-direction, 'safety is paramount'. Professional risk is a corollary of physical risk. The boundary work demonstrated by these quotes ensures the professional definition of both sedation and dentistry. Technically Langa's Planes of Sedation are contained within Stage 1

of Guedel's Stages of Anaesthesia (Girdler *et al.* 2009, p. 83). In that sense sedation can be seen as part of anaesthetic practice or 'anaesthesia-light'. If it *were* defined solely as such, it would therefore require anaesthetic (medical) training. The consequences of this would be to redefine sedation as part of medical activity and to diminish the scope of dental activity. Rather than present SCDPs as ambitious technicians colonising or appropriating part of anaesthesia, the rhetorical work places dentistry in the 'expert' position. Such experts quite reasonably should be self-policing. Sedation is therefore more analogous to local anaesthetic¹⁰³, which is given by both medics and dentists everyday- a modality common to both worlds but self-regulated by each.

The tension between social worlds (Strauss 1978b) or institutions which perform an activity (e.g. medicine and sedation) and 'outsiders' who can also competently perform the same activity but without going through *that* institution (such as SCDPs) is a difficulty of professions' self-definition (Jamous and Peloille 1970). Professional activities are '*the object of a never-ending conflict*' (p. 117) regarding the ability to control resources, which is managed by controlling definition, evaluation and sanctions (Jamous and Peloille 1970; Strauss 1982). Such a conflict is reflected in this reported boundary work, which is the 'legitimation' (Strauss 1982) of each of the social worlds of anaesthetics and sedation dentistry. In contrast to the official boundary between professions, Jamous and Peloille saw the actual boundary of a profession as being between those that are tenuously 'in' '*with an expertise and definition which are recognized [sic] but threatened*' (p. 117), and those out on a limb. Whilst dental sedation is not a distinct profession, the consequences of this boundary work illustrate this assertion. In the process of defending the autonomy of dental sedation provision from the monopolisation by medicine, barriers to sedation provision are consequently erected to others within the dental profession:

¹⁰³ The use of this comparison is discussed in Ch 6.

for me to be doing it [sedation], I had to go on all the courses, to be medically and legally covered, even though it was something relatively simple – I think sometimes we try and over-complicate matters as a profession. And it would have been possible, if I hadn't looked into it, and thought "God I've got to do all this!"...it is made to look very complicated, very hard, by the fact that you're told you need to do this, need to know this, know that ...Whenever a non-sedation person looks into it, the amount of, what I consider over the top, work that needs to be done to be able to do it confidently in practice while being covered by medical-legal protection makes it almost onerous to do. [PCDP7]

I think dentists of my generation didn't get exposure to conscious sedation and we're slightly afraid of it "that's a bit medical". When I spoke to [SCDP] colleagues I got the usual myths about it being "dangerous" and something that anaesthetists should be doing, yet anaesthetists get very limited training in conscious sedation themselves, so they too have a very limited understanding of what it is. I was told sedation "was not any good for restorative dentistry". [SCDP8]

By providing a robust structure of training with related practical and theoretical knowledge requirements, sedation has developed as '*[o]ne of the most highly regulated areas of dentistry*' (Robb 2010). It has become the central activity of a sub-world of dentistry which, by controlling the resource (of sedation) in order to keep legitimate possession, ironically excludes potential recruits from the 'mother' social world of dentistry from becoming members, thereby potentiating the problem of patients' access to services. In addition to regulation-related hurdles to uptake, other more symbolic barriers exist. Lack of exposure to sedation due to limited provision, and the seriousness with which sedation is treated by providers in order to maintain ownership, make sedation a mysterious entity to some dentists which makes them 'slightly afraid'. By being unclear in its contested definition as a normal dental intervention or a special medical intervention, sedation became symbolically as well as physically "dangerous". As implied earlier in the discussion of patients' medical status, Douglas's (1966 [2002]) analysis of 'dirt' demonstrates that ambiguous and uncategorisable things, or '*matter out of place*' (p. 44), can seem threatening, and become socially dirty and dangerous unless resolved and ordered. As such they become either taboo, or governed by rules which '*[shore] up wavering*

certainty [and reduce] intellectual and social disorder' (p. xi). By labelling sedation as dangerous, dentists are able to exclude it from their normal lives in a socially acceptable manner. Sedation is made sacred by them, and as such is left to shamanic others, whether that be anaesthetists or SCDPs. In contrast, as discussed in Chapter 6, the SCDPs themselves reject a shamanic role and do not view sedation as sacred or 'special' at all. Their assertion of sedation as mundane and 'just a tool' might be seen as another form of their boundary work reducing the need for it to be managed solely by the anaesthetists and to overcome the unwillingness of PCDPs to meet some of the clinical need themselves.

In addition to defining ownership, the other achievement of boundary work that Gieryn (1983) identifies is to exempt '*members from responsibility for consequences of their work by putting the blame on scapegoats from outside*' (p. 792). This was highlighted by some respondents who blamed critical incidents involving sedation upon their medical colleagues:

the vast majority of recent, the last 5 years incidents involving sedation have been at the hands of medically qualified, and in some cases consultant level anaesthetists. And that is mostly because they are using drugs which they would be familiar with using in the medical context in a hospital, fentanyl, midazolam, propofol, ketamine and these sorts of things which are fine, but they are not what we mean by conscious sedation. But they are doing this for a dentist and therefore it is the dentist who gets it in the neck in the end when everything goes wrong. [SCDP13]

This assertion that risk in sedation provision is not of dental origin is quantified in some degree by the Rapid Response Report (NPSA 2008), aimed at reducing the risk of overdose with midazolam injection in adults. It highlighted critical incidents and recommended changes to good practice. In 1529 critical incidents, only 2 were identified as occurring in a dental setting. One change implemented by the report has been a rationalisation of solution concentration and volume to prevent miscalculations of dosage. Ironically, a consequence of this change has been an

increased movement away from protocols for dental sedation practice (Bryant and Rood 2010).

The provision of sedation treatment requires an ability to manage patients as individuals, as this is an essential part of the management of physical risk. Whilst the approach to sedation is standardised (i.e. with a similar approach of gradual titration of drug against response) and technology also standardised (e.g. concentrations of midazolam universally set at 1mg/ml), how these methods are applied in local practice however is much more individually based:

(INT) [We] follow current guidance which has hopefully been written by people who know what they are doing but in a very non-protocol way. We do not have protocols for the administration of sedation... a lot of people think that if you write a protocol which is basically get a syringe, load it up, you do this and that, like a flow chart, [what] the protocol tells you is going to be right, the fact is that it often isn't... [W]herever there is likely to be an increased risk we would put in place checks to make sure that those risks were as well controlled as possible. So not a formalised risk assessment but a risk assessment really based on years of experience...we do not use protocols. I won't have them in the department, protocols are for nurses, I don't need a protocol, the whole idea that protocols makes things safe, it doesn't...I think that following guidelines or protocols slavishly is a way to end up with a problem. [SCDP13]

Like Bryant and Rood (2010), SCDP13's colleagues use the standardised technology flexibly depending upon each patient's response. The introduction of measures to reduce theoretical risk through standardisation require a reduced standardisation of actual practice to pragmatically prevent the physical and professional risks of catastrophic over-sedation or under-sedation through mindless or 'slavish' protocol adherence. This discussion of protocols further demonstrates the boundary work undertaken by SCDPs. By distinguishing between protocols and 'guidance', SCDP13 is demonstrating SCDPs' professional autonomy to make decisions about their patients. In addition they use the appropriateness of protocols to separate their clinical practice from that of nurses, thereby demonstrating boundary work that separates SCDPs into nurses and dentists. This particular

comment was the only time in all the interviews where SCDPs were broken down into 'them' and 'us'. It is interesting, and perhaps indicative of the strength of a felt need to define sedationist practice, that discussion of boundaries between anaesthesia and dentistry also induces this participant to break-up an otherwise universally presented united 'team' front that SCDPs worked to convey in their accounts. This division contrasts with other accounts of mixed groups (Allen 2001; Zerubavel 1979) which demonstrate how *'the temporal-spatial organization of work can lead to work group solidarities that cut across conventional lines of demarcation'* (Allen, p. 97).

The use of protocols is an *'ambivalent endeavour'* (Berg 1997, p. 1087). Whilst proponents argue they bring uniformity and facilitate users' autonomous and professional status, as SCDP13 illustrates opponents assert that they lead to thoughtless irresponsible action. Berg's analysis identifies that one major problem of protocols is their abstraction of action from a local context, thereby ignoring contingencies and variations in the definition of 'best outcome'. In sedation practice, procedures must be applied locally and individually in order to bridge the gap between the Rapid Response Report's (NPSA 2008) intention, and the actual situation of use, in order to make it effective. By ignoring aspects or using non-protocol methods to achieve the right ends, such local deviations or 'work-arounds' make sedation 'do-able' (Fujimura 1987; Gasser 1986). Like the management strategies discussed in the previous chapter, such actions are part of the invisible articulation work of SCSCs.

7.3 Managing the Risk of SCSC Sedation Provision

In Chapter 4 I demonstrated that SCSCs are clinical manifestations of a 'boundary organisation' (Guston 1999, 2001). Boundary organisations were developed from an

attention to both boundary work and principal-agent theory (Guston 1999). Principal-agent theory describes the multiple delegations and sub-delegations of action and responsibility that exist between delegating (principal) and acting (agent) parties, and the disparity between the ability to delegate and to check the delegated task¹⁰⁴. In addition to the physical and professional risks that SCDPs manage as a result of using sedation technology, the social process of providing sedation also contains the risks of “*adverse selection*’ and ‘*moral hazard*” (Guston 1999, p. 91) inherent to boundary organisations and their underlying principal-agent theory. These risks are an essential part of secondary care sedation provision, and the following sections discuss their reported management within SCSCs by SCDPs.

7.3.1 The Risk of ‘Adversely Selecting’ Sedation Providers

The complexity of modern life makes it impossible to physically oversee every aspect, instead we place trust in ‘abstract systems’ (Giddens 1990)¹⁰⁵. By doing so, we open ourselves up to the risk of trusting the wrong person in the system to act on our behalf. Adverse selection is the risk of a principal entrusting work to agents who cannot or will not undertake the job to the required standard. It is always present in any delegation, as principals have to assess and assume competency but do not definitely know it *a priori*. Due to the secondary care status of SCSCs, this potential risk is ever-present for the patients (and PCDPs) delegating care to the clinic. A chain of delegation takes place within SCSCs, initiated by the PCDPs who refer patients they cannot treat to their ‘*[s]pecialised medical services*’ (DoH 2009, p. 295). The educational nature of these settings means however that in reality ‘specialised’ treatment is delegated by over-seeing clinicians to inexperienced students learning sedation as part of their dental training. In addition

¹⁰⁴ An examination of P-A T is beyond the scope of this study, though an overview is provided in Guston (1999) along with references to further general discussions.

¹⁰⁵ See Chapter Five for further discussion.

to this chain, SCSCs contain the delegation in actual clinical appointments where patients entrust their dental treatment to the treating clinician to execute on their behalf. Both patients and dentists delegate sedation and dental care to students, whose ability to competently assess patients' physical risk and to titrate to a correct end point is an example of the risk of adverse selection created by referral to an educational establishment.

Once [the dentist] gave me to some students...they were lovely but something went wrong, and I can't explain what went wrong, whether the nose piece wasn't on, whether I didn't breathe properly because they were chatting quite a lot to one another and to me, they were trying to do their best for me, I know that, but something went wrong and my legs went dead, and my hands, so I couldn't put my hand up to stop them, and it was really, really awful, they must have realised and [the dentist] came over. [Eve]

The delegation in this patient's recollection is clear. Rather than seeing herself as a patient of the clinic who could be treated by anyone, she initially belonged to the supervisory SCDP staff member, who as the selecting principal then 'gave' her to some students (agents). Unfortunately, unlike previous appointments she was over-sedated. Despite their attempts to socially interact with Eve, the technical aspect of their sedation provision was unsatisfactorily executed and eventually had to be managed by the delegating dentist coming over and resuming responsibility in order to resolve the situation. By delegating care to students, the patient, referring PCDP and supervising SCDP all expose themselves to selecting treatment by 'incompetent' inexperienced agents. Sedation places social as well physical demands on providers, and the procedural naiveté that students possess may be interpersonal as well as technical.

I think when students start they do tend to chat to the patients, but once it actually comes down to the dentistry, because they are so focussed, because they don't have the same level of experience, sometimes they do tend to forget that you still need to talk to and reassure the patient and do all the monitoring – their vision sort of narrows immediately, and all they see is that tooth that they are trying to restore. I think that's the difference between someone who has a lot more clinical experience and an undergrad...I think with [SCDPs], they are more conscious of treating the whole patient rather

than just the tooth itself...you often see with cannulation with the undergrads, they don't realise when their patients are feeling light-headed, or pale and things like that – they just sort of need to get the cannula into a vein, that sort of thing, and that fills up their whole vision. [SCDP9]

The need to concentrate on unfamiliar technical procedures, to be 'consciously competent' at them, reduces students' abilities to engage socially and to maintain a bigger picture awareness of their patients, both of which are essential for safe and effective provision of treatment. In Chapter Five I discussed that in addition to the chemical effects of sedation, successful provision of sedation depends on the presentation of the providers' *'appearance and manner'* (Goffman 1959 [1990], p. 34) as one of competence and interest. The risk of adverse selection is one of picking a student who is not competent technically, and / or unable to augment the chemical agents by demonstrating empathy and interest and is therefore a consequence of SCSCs' educational role of SCSCs described in Chapter 4.

Boundary organisations manage the risk of adverse selection by monitoring the providers to ensure they do what is required of them in an acceptable fashion (Guston 1999, 2001). Likewise, biomedical education has historically been an 'on-the-job' apprenticeship, providing clinical care *'under the watchful eye of a master or an expert'* (Pugsley and McCrorie 2007, p. 318) who can step-in to avert or correct disaster whilst allowing sufficient autonomy to develop confidence and skill.

I can see the patient lying there and I can see that the situation is changing...but you get the impression that the person doing the sedation is not aware of those signs and when you talk to them afterwards you have actually picked up a lot more about what is going on than that person who is actually doing it...I will look at the undergraduates and see they haven't talked to that patient for a good quarter of an hour, 20 minutes [SCDP12]

The surveillance of students allows SCDPs to correct situations like that described by Eve, and to provide after-the-event commentary and feedback to prevent future lapses of competence. As I discussed previously, the need for such surveillance

impacts the physical environment that treatment is provided within, as it requires a clinical 'panopticon' (Foucault 1995):

[H]igher barriers between the patients [were] suggested by the dignity staff, however they are not as high as they wanted them to be because I made a case that having them as high as they wanted them meant that people can't see over the bloody wall. So you have no idea what is going on, and in fact it is unsafe. [SCDP13]

Whilst some patients might feel intimidated by the openness of SCSCs, it is this very openness which ensures that their trust is not misplaced. In addition to SCDPs monitoring the treating students from a distance, a whole team approach to patient and student management is employed which also allows nurse SCDPs to monitor the situation and act to prevent adverse events at the dental chair.

...communication skills in that situation [of learning sedation] are very poor, but I think it is only because of the stress. The biggest example is cannulation, because they've never done it before, and doing cannulation on patients, there's no talking – once they get the patients out of their mind, and they need to do that or they'll never stick the needle in, so they've got to be focussed, its really the nurses and the team that take over and we explain to them that we will do the behavioural management then, but they've got to be aware of that in the future when they are competent at cannulation. [SCDP7]

The dentist was a bit unsure sometimes, but the dental nurse quite often knew what was happening, what was going on, so I was quite confident in her abilities as well. [Joshua]

Both SCDP7 and Joshua describe how this team approach to patient care enables students to concentrate on specific areas without others being abandoned. This team approach may be seen as another form of the SCSCs' 'articulation work' (Strauss *et al.* 1985 [1997]), enabling the task of treatment to be completed successfully. Whilst this approach meets the shortfall in technical or social aspects of care that students provide, part of the educational role of the clinic is to highlight their need to develop both technical and social competency in the future, internalising the 'gaze' of their supervisors.

The delegation of work by PCDPs to SCSCs involves the subsequent handing over from SCDPs to undergraduates. This entrustment to inexperienced agents carries with it the consequences of inexperience- a lack of competence at the technical and interpersonal skills required to successfully perform the task. In order to successfully present the clinic to patients, SCDPs delegate but ensure proximity, monitor provision and augment it when required. Whilst adverse selection is a risk from the service providers to the patients, the corollary is a risk to the service from the patients and referring PCDPs, and is the other risk intrinsic to boundary organisations- the risk of moral hazard.

7.3.2 The ‘Moral Hazard’ of Patients and Referrers

Moral hazard is the risk of providing an incentive for individuals to ‘*cheat, shirk or otherwise act unacceptably*’ (Guston 1999, p. 99) by either undertaking work on their behalf or by giving them autonomy¹⁰⁶. By providing a technological means of receiving dental treatment on patients and PCDPs’ behalf, SCSCs risk the moral hazard of responsibility being delegated by both parties to the treating SCDPs.

The moral hazard of patients abdicating responsibility for their own oral health is integral to the practise of dentistry. Dental caries is a preventable disease (Balakrishnan *et al.* 2000), and an essential part of dental care is the motivation of patients to take personal responsibility for creating the right oral environment to prevent caries, by reducing sugar in their diet and cleaning their own mouths, instead of giving dental professionals the responsibility for both providing oral hygiene and treating the consequences of its failure (Felton *et al.* 2009). This motivation is provided by monitoring through recall appointments, and providing

¹⁰⁶ For example, by feeling my property is ‘safer’ once insured (as I can always claim on the insurance) I may not be so conscientious about locking windows and putting on the house alarm when I go out.

incentives by stressing the effects of clean and dirty mouths through dental education. The effects of these activities is to expose patients to the disciplining effect of the '*dental gaze*' (Nettleton 1992, p. 41) which they internalise in order to become their own watchmen. This particular moral hazard, present in probably all dental interventions, is not within the scope of this thesis, although the implicit delegation of responsibility for oral health by choosing sedation treatment referral was reported.

A lot of them say "You are the dentist, you do what you feel is appropriate". You say "but do you want X or Y?" And they say "whatever you recommend, I'll go with that". A lot of them will say that. I say "you need to make a decision here, I can't decide for you". [PCDP5]

Accounts of patients' delegation of responsibility for decision-making reflect parent-child rather than collaborative (or even a consumerist) forms of dental relationship. 'Informed consent' dictates that PCDPs should outline the pros and cons of each modality before asking their patient to make a choice (NHS Choices 2010). Although lay patients have limited understanding of sedation, they still have an opportunity to venture provisional preferences based on the information given, yet PCDP5 reports them as seeking to abdicate their choice and delegate it to the person with dental expertise. This perceived passivity of patients is also a characteristic of the more prevalent moral hazard of SCSCs, the risk of them becoming dependent upon sedation.

Although psychological treatment may provide a long-term reduction of their dental anxiety (Aartman *et al.* 1999; Dailey *et al.* 2001; Hakeberg *et al.* 1993a; Kvale *et al.* 2004; Kvale *et al.* 2002; Milgrom 2007; Thom *et al.* 2000), patients may perceive treatment in secondary care settings as 'the only way' they can receive dental care. This perspective places responsibility on SCDPs to pharmacologically overcome

their anxiety and facilitate their treatment within SCSCs, rather than assuming personal responsibility to overcome their anxiety by personally addressing it.

I think there can be a down side [to sedation], because some patients perceive it as an easy option. So they'll go off and they might think that they are just going to be asleep or – while everything is done, so they have no responsibility at all then, in the interim. [PCDP2]

Although PCDP2 provides an assumed account of patients' motivations, this is based on their experience of interacting with patients. The external location of ability and responsibility PCDP2 reports might be predicted based upon the 'typical' characteristics of anxious patients. Patients with early-onset dental anxiety often demonstrate a high external locus of control (belief that outsiders have the power to affect my life). Similarly, a low internal locus of control (belief that I have the power to affect my life) is contributory to late-onset anxiety (Poulton *et al.* 2001). Given that anxiety is correlated with high external and low internal control, treatment itself may be felt by patients to be outside of their designation. Anxious patients may have developed '*learned helplessness*' (Seligman and Maier 1967, p. 8), the state which develops in individuals exposed to noxious stimuli who are passive or have no control over circumstances. Such individuals perceive an inability to affect their experience and subsequently give up trying impose any form of control.

Delegation of effort and responsibility to SCDPs is also a risk from the referring PCDPs. Treatment of anxious patients within primary care is stressful (Cooper *et al.* 1987; Hill *et al.* 2008; Humphris and Cooper 1998; Moore and Brødsgaard 2001; Wilson *et al.* 1998), and makes some PCDPs anxious (Corah *et al.* 1985; O'Shea *et al.* 1984). Patients who interrupt treatment or fail to attend (Hakeberg *et al.* 1992b) have financial implications for PCDPs. The additional time required to treat anxious patients or the loss of income through failed appointments is not remunerated within the NHS General Dental Service contract (DoH 2006), and is therefore a concern to

PCDPs (Hill *et al.* 2008). By providing a service which specifically treats anxious patients on PCDPs' behalf, SCSCs may tempt PCDPs to refer patients rather than try to treat them. Studies of doctors have identified this type of referral as 'turfing' (Caldicott *et al.* 2003; Stern and Caldicott 1999). Turfing is inappropriate referral from one biomedical colleague to another, delegating responsibility based on convenience to the referrer rather than on patient benefit (Stern and Caldicott 1999). Although no accounts of turfing were either volunteered by PCDPs or mentioned 'on the record' by SCDPs, 'off the record' some SCDPs did discuss the existence of PCDPs who provided multiple 'rubbish' referrals to SCSCs. Audits of sedation referrals show disparities in referral patterns, with some practitioners referring ten times the amount per annum than their colleagues (Woolley 2009). In addition a significant proportion of patients referred for pharmacological management are subsequently treated using behavioural management techniques common to both PCDPs and SCDPs (McGoldrick *et al.* 2001; Woolley 2009).

In order to manage these moral hazards of dependency and turfing, clinics put into place procedures to be defined as secondary care clinics. Referral criteria request PCDPs to document their *'[r]easons and justification for the use of conscious sedation, after consideration of alternative methods of pain and anxiety control'* (DSTG and SAAD 2001)¹⁰⁷. Once a patient *has* been referred and accepted, SCDPs undertake work to limit the delegation of responsibility, so that patients do not stay in the secondary care 'system' once their treatment is completed but are returned to primary care. Within SCSCs this was reported as a pragmatic issue, undertaken to facilitate their service-provision role. Discharge of patients back to PCDPs prevents SCSCs becoming

¹⁰⁷ Cardiff University Dental hospital requires *'details of the acclimatisation procedures and dental treatment attempted'* (UDH 2007, p. 26).

clogged up and new people can't get treated because there's never a window for them. Effectively [making] the new waiting list even longer. [SCDP6]

The management of patient dependency involves a movement away from a general anaesthetic mentality, where patients are completely oblivious of treatment, to one which is more conscious and therefore aware. This requires SCDPs to encourage patients to try options they wouldn't automatically choose:

Most patients come in with a preconceived idea, they want to be put to sleep and they are the difficult nuts to crack...[S]ome of them take a lot of persuading. I have had to say at certain times "I am sorry I can't offer you a general anaesthetic" which to be honest with you is not strictly true, but you know if I give them that, just that glimpse through the door they would be through it. I have to somehow get them to have a crack at IV [intravenous sedation with midazolam], because as I say if I get them to do that then I am away. I think that we are away. [SCDP11]

Such reported constraints show the articulation processes SCDPs undertake of 'negotiation, persuading, educating, manipulating, and coercing' (Strauss 1988, p. 175) patients to try lighter modalities in order to achieve their hidden agenda of rehabilitation to primary care dentistry. Even if patients accept sedation instead of DGA, the risk of dependency remains. Participants reported two perceived objects of patient dependency- the particular provider and the sedation itself:

the biggest problem is that your patients do become operator dependent and that is an issue. [SCDP7]

I haven't changed a lot really. When I come here I'm still nervous and on edge. When I sit in the seat I'm still like that, clinging onto the arms. The gas and air kind of relaxes me... When I came in and they said it wasn't available I thought I was going to faint, so it puts my mind a little bit at ease but I'm still on an edge. [Ruby]

Whilst receiving sedation and building a relationship with their treating clinician, this approach to treatment becomes patients' accepted status quo. As Ruby illustrates,

when sedation isn't available due to external circumstances¹⁰⁸ a major disarticulation occurs. To manage dependency, a further downgrading occurs which mimics that from DGA to sedation. Patients who receive sedation for treatment are encouraged to change the form of sedation they usually have, or to try simple treatments with a lower dose or even without sedation at all.

if they are on IV sedation and they are becoming increasingly happier with the situation perhaps [I'll] change to inhalation sedation to finish off the course of treatment. [SCDP12]

to wean those that I was using [sedation on, I'd use the] praise scenario- "you did really well last time, this is only a little one. You don't need to be zonked and needing somebody to take you home and bring you etc." Giving them a degree of confidence that they can do it for you, and then do it with just local [anaesthetic]...[to] move them from that onto local anaesthesia and treatment with nice management. [SCDP3]

Weaning is not imposed upon patients, but is a collaborative act encouraged by SCDPs, in much the same way as parents encourage children to step beyond their 'comfort zone'¹⁰⁹.

I do not believe that we should forceably wean patients off sedation, it is a thing that we normally do in conjunction with the patient and we might say "you come in next time and you are only having something trivial done, would you like to try that without sedation?", and if they say "no" then it is absolutely fine. What we would normally do though if we do [attempt to try without] is say "bring an escort anyway just in case it is a bit too much for you and then we can sedate you". Flexible, flexible! [SCDP13]

This change of drug and dose reflects the 'generous constraint' used with heroin addicts in Gomart's (2002) study of a French drug rehabilitation clinic. Rather than impose upon addicts a traditional legal and medical model of enforced withdrawal followed by support, the clinic in Gomart's study acknowledged the interdependency and multiple influences upon addicts, and worked with them by encouraging

¹⁰⁸ In this incidence Ruby is discussing IHS being unavailable due to a technical failure with scavenging equipment.

¹⁰⁹ Such an analogy lends itself to a misunderstanding that this encouragement is disempowering rather than attempting to empower. However, any patient:dentist relationship inevitably contains some element of parent:child relating (Berne, 1967) and as discussed earlier, more so with anxious patients.

autonomous decision making. Mini-contracts were set up encouraging addicts to try alternative approaches to their drug use. Similarly, SCDPs negotiate with patients, persuading them away from DGA towards sedation and encouraging patients to attempt treatment with different modalities and doses. Such persuasion is given in a supportive environment accommodating the possibility that such changes might not be successful initially. Traditional treatment centres in Gomart's study '*had patients unwilling or incapable of abstaining thrown onto the streets and thereby condemned them to a cycle of aggravated use-delinquency-marginalisation*' (Gomart 2002, p. 527). In contrast, a long-term relationship existed between the clinic Gomart studied and the patients it served. As secondary care centres, SCSCs varied in this particular approach to dependency management. Patients *are* discharged following completion of the treatment plan, however this discharge is provided in a manner which does not 'orphan' the patients:

You can't go on recalling people indefinitely because that's not what we're supposed to be doing, now...we try to get as many patients back out at the end of their treatment. And most of them in fairness don't mind because they know that they've got [us] to fall back on. If they do need to come for any sedation, they can just be referred back in. You do get the odd one or two who just can't see past that block: "I've been treated here; I can't be seen anywhere else!" Then that becomes a little bit, you're sort of fighting a little bit there. But I think the patients that do get discharged that way, it's a good thing 'cause they are getting themselves back out there and they know that they can come back if they need to. [SCDP1]

the vast majority of those patients are discharged at the end of their treatment... what we say to patients is that if they have a problem or if they would like a check up in a years time then they can contact us and we will see them again. [SCDP13]

Discharge might be resisted by some patients, but it is essential to create clinical space to treat new patients and reinforce SCSCs' identity as secondary care centres. The discharge policy of SCSCs holds a middle position between the two stances described by Gomart (2002) of traditional enforced independence with exclusion of non-conforming individuals and the acceptance of ongoing dependency and engagement described by feminist critiques. By discharging patients at the end

of treatment but leaving open the possibility of being re-referred, SCDPs follow a pragmatic course of action continually stimulating patients to try to be independent but supporting them if they are unable. Ethical guidance within counselling suggests that developing autonomy is encouraged by enhancing clients' sense of what they need, and accepting their choices (Bond 2000). These approaches that Bond (2000) and Gomart (2002) describe are echoed by those SCDPs who see their role as encouraging a movement away from sedation without forcing such a move. Hosting visitors is an activity undertaken for a limited period, and prompting patients back towards their primary care origins prevents the moral hazard of SCSCs losing their status as secondary care facilities and instead becoming the patients' regular dentists.

Although patients can be re-referred if they need to 'fall back' on SCSC-based sedation in the future, this need to discharge was perceived as requiring a supporting approach, and was therefore not always seen as ideal given the possible lack of empathic treatment in primary care.

I would like there to be a safety net in place for them to have somewhere to be discharged to. Just turning round to people and saying "Sorry, that's it. You're out" I think is slightly unkind to a group of people who are in need of help. [SCDP2]

In this sense of gradually fading support, sedation provision resembles educational 'scaffolding' (Wood *et al.* 1976). Educational theory proposes that teachers follow a process of extending pupils' abilities by supporting their learning and gradually withdrawing this support once the task is within the students' abilities. In order for internally-controlled learning to occur, students must eventually take full responsibility in a supportive environment. Although they are not formal educational environments for patients, as sites of re-engaging patients' first contact with dentistry SCSCs can play a role in educating them about the reality of 21st century

dentistry rather than how they fear it to be. The realisation by anxious patients that they have the ability to undergo dental treatment requires a sedation scaffold which supports them in the act of having treatment and engaging with dentistry, but which is gradually withdrawn so that they aren't dependent upon it and can consequently take responsibility for managing their anxiety and therefore their dental care.

7.4 Conclusion

The provision of sedation is far from risk-free. This chapter has explored the techno-social risks of providing sedation in SCSCs, and the back-stage work of managing these risks to enable a successful performance of treatment. Sedation treatment is haunted by the spectre of dentists' professional boundary contraction should catastrophic failures in safe provision occur. Managing the physical risk that adding chemicals to patients' bodies can potentially create contributes to patients' perceptions of safety but also ensures SCDPs' professional autonomy. In addition to the physical and professional risks that sedation technology creates, there are the risks of the social process of sedation provision. The boundary organisation role that SCSCs fulfil has intrinsic risks of delegation to inferior actors, and delegation of responsibility by commissioning principals. An essential part of the process of provision therefore involves the management of these risks.

Sedation risk management requires additional 'safety', 'articulation' and 'boundary work' (Gieryn 1983; Strauss *et al.* 1985 [1997]) to be undertaken by the SCDPs. Such activities ensure patient safety, define the practice of sedation and the purpose of the clinic it is provided in, and allow the management of undesirable delegation. Having explored the back-stage and front-stage processes of providing sedation within SCSCs, in the next chapter I examine the outcome for patients of attending them for treatment.

Chapter Eight - Patient Outcomes

8.1 Introduction

The preceding three chapters examined the back-stage and front-stage work of hosting patients for sedation treatment within SCSCs. This chapter explores the effects of such work on the attending patients. Whilst I discuss the impact on patients, attention is paid to the 'voices' of all parties involved, reporting accounts from the patients of their experiences, as well as from the clinicians who engage in a participant-observation relationship with them. Chapter Four demonstrated that clinicians and patients have different perspectives on the purpose of sedation within SCSCs. This chapter explores the consequences of these differing views on patients' and clinicians' interpretations of how attendance impacts patients.

The chapter continues extending the boundary organisation concept beyond the policy:science interface to the lay:clinical interface, as well as exploring the consequences of the boundary objects they employ and the processes of transformation that SCSCs potentially facilitate. Reflecting upon the vicious cycle of dental anxiety (Armfield *et al.* 2007; Berggren 1993) and Turner's discussion of liminality (1964, 1967, 1969 [1995], 1974, 1977, 1979, 1982) I explore how SCSCs impact attending patients. I examine the potential for SCSCs to pause the cyclic effect; to break it or to replace it with another vicious cycle of sedation dependency. As frontier organisations SCSCs are shown to undertake the functions of boundary organisations, as well as being potentially transformative temporary spaces which create liminal and liminoid experiences for patients via the status of being sedated. I conclude the chapter by suggesting an alternative cyclic pattern that anxious patients can engage in which is compatible with the short-term aims of sedation outlined in Chapter Four.

8.2 The Liminal Clinic

SCSCs are located away from local communities on hospital sites, attendance at which requires patients to leave their normal social milieu. By doing so they withdraw socially as well as physically from society, divesting themselves of their usual status and roles in order to temporarily take part as patients in the ceremony of the clinic (Strong 1979; Strong and Dingwall 2001). Previous analysis of secondary care treatment (Menkes *et al.* 2005) has demonstrated that these attributes may be understood in light of Turner's discussion of liminality (Turner 1967, 1969 [1995], 1977, 1979, 1982). Liminal spaces such as hotels, beaches and (more relevantly) no-man's land are temporarily occupied areas '*betwixt and between*' (Turner 1969 [1995], p. 95) different physical and social worlds. In such spaces people have the freedom to participate in activities which they would not usually engage in, and to gain experiential knowledge of previously taken-for-granted social structures which have been stripped of their usual settings, meaning and gravitas. Within liminal spaces, a change in location coincides with a change in state (Azaryahou 2005; Shields 1991) so that such sites both embody liminality *and* create it in their inhabitants (McLoughlin and Warin 2008). This liminality can fundamentally change participants by developing new characteristics in them (Turner 1967).

Patients attend SCSCs for treatment they could not otherwise countenance. SCSCs were described earlier as 'Janusian', in their ability as clinical boundary organisations to relate simultaneously to both the latent lay world of patients and the referring clinical world of primary care dentistry. Being neither complete avoidance nor full engagement with dentistry, and mediating between these two worlds, SCSCs have the potential to be like the eponymous deity- involved in '*boundaries*

and the transitions; [representing] a 'rite de passage' (Adams Holland 1961, p. 3). Such liminal clinics provide an opportunity for the hidden and accepted aspects of dentistry to be reassessed, and to facilitate a change in attending patients.

8.3 The Vicious Cycle of Dental Anxiety

Dentally anxious patients participate in a vicious circle of engagement (Armfield *et al.* 2007; Berggren 1993) (See Figure 2.1). The fight-or-flight response that anxiety invokes causes patients to avoid attending dental care (Mejía *et al.* 2010). By avoiding attendance, patients escape the '*dental gaze*' (Nettleton 1992, p. 41) which can detect potential problems and discipline them into addressing them. Such avoidance is detrimental to patients' oral health (Cohen *et al.* 2000), and the combination of anxiety, poor dental appearance, and pain affects all aspects of patients' lives from sleeping and eating, to leisure pursuits, relationships and socialising (Abrahamsson *et al.* 2002b; Abrahamsson *et al.* 2000; Berggren 1993; Cohen *et al.* 2000; Kent *et al.* 1996; Locker 2003; McGrath and Bedi 2004; Moore *et al.* 2004). The negative oral health impact of anxiety-derived avoidance eventually forces patients to attend a dentist for emergency treatment of dental pain, and this potentially traumatic 'emergency' treatment reinforces their original anxiety, thus completing the cycle. By engaging with dentistry through mediating SCSCs, patients have the potential to affect this cycle.

8.4 Stopping the Vicious Cycle- Having Dental Treatment

The immediate outcome of attending SCSCs is access to successful dental care, meeting the clinics' service provision objectives. Accessing dentistry within SCSCs halts the anxiety cycle from progressing by addressing oral health needs without exacerbating anxiety.

I've had my treatment done so that's made me feel a lot better. It has made me feel a lot more confident about going to the dentist and stuff as well, although I probably would still be hesitant to go back to a normal dentist, I'd rather come here... [Joshua]

Although Joshua is still 'hesitant' to attend a 'normal dentist', he now seems less likely to continue his previous cycle of avoiding *all* dentists. He feels better having had the dentistry and able to contemplate some form of future attendance. Treatment in SCSCs provides a way for patients to improve their immediate oral health, and reassures patients about their management of future problems by providing a way for them to address their needs. Successful treatment is self-evidently physically transformative for patients- pain is relieved, decay is removed, teeth are filled or extracted and smiles restored. Having had this treatment, patients leave the clinic with a clean slate.

it almost sounds like debt cancellation, although it's a dental disease version- "we'll cut out those credit cards, and then we can give you a new kind of way of managing that small amount". [PCDP3]

they are bringing my teeth up to a standard that is acceptable to me, and therefore by doing that I'm not going to have to have so much treatment, by keeping a check on them. [Eve]

The debt metaphor is clear. Avoiding overwhelming problems allows them to worsen. By addressing patients' oral health 'debt', future demands can be tackled at a more manageable size¹¹⁰, or indeed prevented 'by keeping a check' on their mouths. This new start that SCSCs provide can extend beyond a physical change, as addressing the negative impacts that anxiety has on patients' quality of life can affect wider psycho-social aspects.

We had a patient who was desperately, desperately trying to get herself together: Get her life back on track...she trusted us enough to let us complete the treatment, and at the end she was crying because she had

¹¹⁰ By restoring dental health future treatment could be more preventative such as examinations, fluoride applications and cleaning. Should restorative treatment be required, it would then involve minimal numbers and sizes of cavity to be addressed.

teeth. She was so happy, and she lost some weight and she went out and got a job, because she felt so much more confident. [SCDP1]

The transforming power of SCSCs extends beyond a physical change to a psychological change. Successful completion of treatment can have a significant secondary impact, helping patients get their lives ‘back on track’, increasing self-respect and prompting changes in their life circumstances. Being able to access dentistry in a manner that does not reinforce anxiety is therefore both physically and psychologically transformative, halting the vicious cycle of dental anxiety.

8.5 Breaking the Vicious Cycle- Developing Trust

The impact of sedation treatment can extend beyond pausing the cycle, to fundamentally disrupt it. In addition to changing patients physically, and precipitating other life changes as a consequence, SCSCs can affect the way they approach the profession by creating opportunities for patients to confront anticipated fears and subsequently update their pictures of dentistry with contrary evidence. The dramaturgical performance of sedation reconstructs dentistry as a caring and competent profession seeking to act *pro bono publico*. During such occasions anxious patients and clinicians engage in a form of ‘*reparative relationship*’ (Clarkson 1995, p. 108) similar to that of psychotherapy. For treating professionals such interactions aim to correct previously negative experiences by providing or facilitating counteracting ones¹¹¹ with the intention of precipitating change in participants. Direct application of such a concept may be an oversimplification, as the aetiology of dental anxiety is complex (Locker *et al.* 1999b; McNeil and Berryman 1989), nonetheless SCDPs’ sedation performance sought to redress the perception of dentistry as a painful and abusive interaction by overtly demonstrating

¹¹¹ For example by respecting a client’s autonomy to make decisions, a therapist may counteract the controlling behaviour of their parents.

empathy and care. This intention to reconstruct perceptions of dentistry was typically held by treating and referring clinicians rather than patients (see Chapter Four). When such reparative events are successful, an attitudinal shift occurs so that patients develop trust and a willingness to stop avoiding dentistry- the cycle is not just halted but broken.

Trust is a significant issue for anxious patients. They feel ambivalence between engaging and avoiding, and have difficulty trusting dentists to provide treatment in a manner which will not fundamentally threaten them (Abrahamsson *et al.* 2002a; Abrahamsson *et al.* 2002b). Attending SCSCs enables patients to manage this risk of adverse selection, as they learn that they *can* place trust in dental settings and individuals.

the thing that seems to comfort them is that they know where they can get treatment. So it is not just the treatment that they have had, but they know where they can get treatment. They have found a good man. It is like when you find somebody that can cut your hedge well: "I know a good man". [SCDP13]

In addition to halting the deteriorating cycle by providing trauma-free treatment, SCSCs create a way out of the cycle by providing a place patients can attend to be treated by a 'good man' [*sic*] rather than avoid dentistry. All patient participants developed trust in elements of the SCSC. For some this was in one specific individual, whilst others trusted SCSCs as a whole- imputing trust to any clinician working within their sanctioning environments. In addition to trusting SCSCs, some patients indicated a willingness to attend PCDPs following treatment completion. Such a change was rare, reflecting findings by Averley *et al.* (2008) in their study of paediatric sedation. In that qualitative study, only one participant (4%) expressed a willingness to subsequently attend without sedation. The authors concluded that '*[i]ronically, the only change was that [participants] would be less anxious about the actual process of [sedation] in the future, because they knew what to expect*' (p. 11).

Regardless of the extent and location of patients' trust, treatment within SCSCs provided a 'reparative' opportunity for patients to experience dentistry.

[T]he trust was previously not there with the dentist. It was that fear that they were going to hurt me, but the recent contact I've had with the dentists has built that trust back up... it's made me a lot more willing to use dentists 'cos I admit that I spent an awful long time in the past from visit to visit, purely because I'm thinking "oh my God what's going to happen?" The dread of going [to the dentists] it's just a pure dread of what's going to happen to me. Where now I can't say I'm totally over the nerves of it all, but I'm more prepared now to go "oh right let's go and have a scrape and a clean. One step at a time, and see how that one goes" and it's built my confidence back to go to the dentist really. To get me to accept dentists aren't mad axe men or something like that! [Olivia]

(E) *Sedation to me is a way that I can get it done. It hasn't got over my fear, but I've met people who I trust.*

(SW) *Right, and trust is important?*

(E) *Trust is very important – that I'm not going to die. [Eve]*

Before attending the SCSC, Olivia and Eve only went to a dentist when forced to by circumstance. This erratic engagement met their immediate dental needs but did not provide any evidence to dispute their fears. By engaging with the social world of dentistry through the SCSC 'access point' (Giddens 1990, p. 84), both their views of dentistry have changed. Eve's experience has addressed a fear of dying that Abrahamsson *et al.* (2002a, p. 191). also reported in their study of Swedish patients. She still fears dentistry, but she can now attend SCSCs because her trust over-rides it. This perceived threat is also reflected by Olivia's caricature of dentists as 'mad axe men', comically yet graphically illustrating her previous attitude. Though she still feels anxious about treatment, her experience has built a relationship which is 'more willing'. This change in patients' constructions of dentists was mediated by the clinicians they encountered. Like other boundary organisations, SCSCs challenge participating parties' perceptions, helping the development of trust between members by bringing them face-to-face and facilitating their interaction (Cash *et al.* 2003; Tribbia and Moser 2008). By meeting representatives of the dental world in SCSCs, the manner in which these 'contact men' [*sic*] (Wilensky 1967, p. 10)

treated patients provided experiential knowledge of dentistry which ameliorated previous experiences and addressed catastrophic predictions. Patients gain an understanding of aspects of dentistry which consequently changes their initial aversion. Having experienced relationally-reparative dentistry, some return to their social worlds willing to engage with primary care dentistry in future.

I would try my best never to go to a dentist prior to sedation, and now I'm more open-minded to being more regular with visiting the dentist. [Olivia]

in an ideal world I'd like to have all my check ups and basic stuff done at my local dentist, but if I did need something doing again (, hopefully I won't for quite a long time), hopefully it would be quite a smooth transition back [to the SCSC]. [Jack]

By constructing a trusting relationship with SCSC clinicians, and experiencing the reality of dental treatment rather than their catastrophic expectations (de Jongh *et al.* 2002; de Jongh *et al.* 2003), these patients are able to change in their attitude towards primary care dentistry. Patients' changes in engagement might be limited to submitting themselves to a PCDP's 'dental gaze' (Nettleton 1992, p. 41) prior to referral for treatment, or they may extend further, becoming a volte-face where patients attend PCDPs in a manner previously unacceptable to them. Such patients have internalised the SCSCs' tacit ideology of rehabilitation to primary care. Regardless of the degree of engagement, both outcomes are significant changes from previous orientations and reinforce previous evidence of SCSCs' potential to effect change (Wallace 2006).

By attending SCSCs, patients step out of their normal pattern of life. They attend clinical locations physically separated from their normal environments and engage in relationships with the clinics' personnel which are devoid of the roles and responsibilities they normally hold. Once sedated, they mentally inhabit a middle state of consciousness- alert enough to participate in treatment, yet dissociated enough not to worry about it. By experiencing dentistry in an unfamiliar location and

state of mind, predictable patterns of dental care are abstracted from their usual arrangement and are re-examined sufficiently so that patients can change their relationship with dentistry. Such clinics are liminal sites, giving patients *gnosis*' (Turner 1967, p. 102) of dentistry which they previously lacked. This understanding and experiential knowledge changes patients' attitudes and the way they interact with the dental world, allowing them to trust aspects of dentistry they previously avoided. Such liminal experiences are transitory, transitional and transformative processes. Rites-of-passage eventually end and, having passed through, participants return to the normal structures of society taking a new role. As a liminal space, the development of trust is not the definitive outcome of attending SCSCs, but a stepping stone to another position. Whilst SCDPs intend this to be a transformed and rehabilitated return to primary care, another outcome was the ongoing cul-de-sac of dependency.

8.6 Replacing the Vicious Cycle- Developing Dependency

The ability to apply trust from specific individuals within SCSCs to a wider setting varies. Wallace's (2006) audit of a SCSC found that whilst 14% could consequently have some or all of their treatment without sedation (11% acclimatised to just local anaesthesia for all treatment and 3% for some), 45% remained long-term sedation patients (28% IVS, 16% IHS and 1% oral respectively). Olivia is willing to impute learnt trust to PCDPs outside the clinic, having had a transformative and reparative experience of dentistry; Jack is willing to trust PCDPs solely for non-invasive surveillance prior to referral; for others like Joshua and Eve however, the trust they have developed in SCSCs is not transferable. This development of limited trust in specific settings or individuals is not unexpected. Clarke and Casper's (1996, cited in Clarke and Star 2003, p. 545) analysis of the social worlds involved in a medical process found that clinicians' trust in work undertaken on their behalf was based on

developing a shared understanding through reliable relationships. It is unsurprising that trust developed between patients and SCSCs may also fuel patients' wishes to continue treatment with the same people or within the same environment. By doing so, they too ensure a greater reliability and reduce the risk of adverse selection. In these instances the pattern of avoiding primary care dentistry continues, transformed into dependence upon secondary care dentistry.

The interplay between trust and dependency is a ubiquitous trait (Jacobs 1998) and a potential issue for all professions involving an element of reparative interaction (Clarkson 1995; Tait 1997). The risk of trust becoming dependency was discussed by all participant groups, and related to both the SCSCs *and* the sedation they provide. Though complex to analyse, one factor in the creation of this dependency is the contrast between the setting that trust is developed within and the one which patients would subsequently attend. Whilst SCSCs aim to change patients' attitude towards primary care dentistry, in order for experiences to be effective in changing subsequent perceptions they must be both contra-expectational *and* seen as typical of conventional practice (Kent 1986). If the treatment received is not 'typical', any difference between expectation and experience is attributable to the exceptional status rather than any empirical difference. The atypical natures of both sedation and SCSCs therefore have the potential to create this outcome.

8.6.1 Depending on the Clinic

The SCSC environment affects patients' experiences of dentistry. As discussed earlier (see Chapter Five), spaces are not neutral locations but embody underlying philosophies and ideologies (Prior 1988, 1992). Whilst primary care dentistry is usually provided by small groups of PCDPs in converted domestic or commercial

buildings¹¹², hospitals physically represent inherent expertise and safety. They are seen by patients as sites of both quantity and quality, containing large numbers of clinicians as well as experts to whom others refer or by whom others are taught. In addition, by containing emergency and critical care on site, they are perceived as 'safe' destinations should existential threats occur. By attending a dental hospital for sedation, the location itself therefore has the potential to affect patients' interpretation treatment.

after I went down [the hospital] I've got no time to go to a normal dentist. No, I wouldn't – well I'd be too scared to be honest, to go to a normal dentist, that's how much faith I've got in that hospital... Before, I wouldn't go to the dentist at all – I was so scared because I have had a couple of bad experiences with dentists, but going down there...It's the only place I'd go, is down [the hospital]. Now I'd go anytime. And I'll have any treatment done as long as I'm sedated. [Thomas]

I think people are a lot more confident when you are coming to a dental hospital rather than to a normal surgery– it just seems more professional, there are nurses everywhere. For me it felt a lot more confident coming here than to another dentist... you just feel more secure... you think "there's people around that know what they are doing". [Joshua]

Like Grace (Chapter Five, p. 148), Thomas only wishes to engage with dentistry via SCSCs. Having found a 'good man' [sic] [SCDP13] (p. 219), it is hard for patients to exchange what they 'know' for untested PCDP alternatives. They become dependent upon the setting they can trust, where SCDPs' supervision and monitoring minimises exposure to the risk of 'adverse selection' (Guston 1999, 2001). Unlike the midwives in Scamell's (2011) study, the constant surveillance reassured patients that everything was safe. The contrast between Thomas' previous bad experiences and the SCSC has not been reparative but has instead highlighted and reinforced his need for avoidance. Although SCSCs can intimidate patients as partially modified panopticons, the openness also communicates messages of security. Joshua's experience of the hospital's 'professional' image

¹¹² Purpose-built practices do exist, but they are still usually small enterprises in comparison to hospital sites.

and busy-ness contrasts against the relative isolation of a PCDP, seeming 'more professional' and therefore more secure. This felt security within the hospital setting may stem from the fundamental vulnerability of anxious patients. Psychotherapy clients¹¹³ present as helpless and dependent upon therapists not just because of perceived expertise, but because they have a deeply held underlying belief that they will not survive (Mcleod 1998). By attending a hospital which is laden with meanings of safety and expertise, patients may similarly feel more reassurance about their perceived 'existential threat' (Abrahamsson *et al.* 2002a, p. 190) than that present 'in a [converted] house' [Grace] (p. 148). In addition to addressing this vulnerability, the need to be in a place where staff 'know what they're doing' may also relate to patients' discourse around sedation's safety and stem from a concern about the risk of anaesthesia.

The hospital is always at the back of my mind. If something goes wrong, I'm at the hospital...I would think twice before I [have sedation] in the normal [dentists']. The hospital is very nice; they just care for you so much better...Dentists are nowhere near as good as the dental hospital. No where near! [Oliver]

There is the thought that maybe it isn't healthy to inhale chemicals or whatever. So from a medical point of view... surely on medical grounds the anaesthetic- that can't be good for you? [Olivia]

Olivia questions whether the actual sedation technology is fundamentally unhealthy¹¹⁴, whereas Oliver's views relate to the process of its use and focus upon unplanned contingencies and the quality of the staff caring for him. Like Joshua, the hospital environment reassures him that he will be surrounded by expertise 'if something went wrong', a message communicated by SCDPs actual risk management practices (see Chapter Seven). The discourse map (Figure 8.1) made

¹¹³ Individuals who use psychotherapy are referred to as clients rather than patients.

¹¹⁴ Elsewhere she discusses how 'it's best to leave things to be as natural as possible, if you can do any sort of care as natural as possible', so may well be coming from stance of 'natural is healthy, artificial is unhealthy' reflected in GM debates (See for example Shaw (2002)).

during analysis which plots talk about perceived sedation safety against discussion of its ideal location shows that participants (quite logically) tied safety to location.

Sedation Safety	Safe	Safe, should be available at every dentists	<i>Position missing in data</i>	<i>Position missing in data</i>
		Possibly risky, should be available at every dentists	Possibly risky, should be limited to specialist clinics	<i>Position missing in data</i>
	Unsafe	<i>Position missing in data</i>	<i>Position missing in data</i>	Definitely risky, should be limited to hospital
		Primary care	Sedation Location	Secondary care

Figure 8.1 Discourse map of sedation location and safety

Participants discussed the safety of sedation, and at separate times in the interview also talked about where sedation should be practiced. As might be expected, Figure 8.1 shows that when sedation was seen as a safe or risky endeavour it was thought to be appropriate for primary or secondary care respectively. No-one who discussed sedation as safe yet limited its use to hospital settings, nor as unsafe but usable anywhere. Perhaps the only surprise was that where questions of safety could arise, participants were still happy for it to be offered in primary care rather than verging on the side of caution and limiting it to secondary care settings.

Related to the idea of a hospital being a site of safety is its role as a referral setting providing expert treatment.

Some people are trained to deal with anything that comes their way, like your normal dentist practice [where] you'd expect all things to come through the door. Whereas certain people specialise and have knowledge about how sedation might affect the treatment that you need to deliver, and they might be better at dealing with people who have problems, or have chosen to pursue a career dealing with patients who have problems in that area. [Jack]

By contrasting the generalist PCDP and the person who specialises, Jack draws a distinction that imputes SCDPs with added knowledge about interactions and impacts, competency at patient management, and interest in '*patients who have problems in that area*'. Despite Jack's construction of sedation as a specialist interest¹¹⁵, this stance was not typically reported first-hand by patients but imputed to them by both SCDPs and PCDPs due to *their* experience of patients.

they see the consultants in the white coats, and they think "oh yes, I'm getting the proper treatment here, I'm getting top notch treatment"...if they [go] to the hospital they always say "oh the consultant is trustworthy, a pillar of society, they've done all this training and everything" so they tend to trust the men or the women in the white coats much more than the practitioner. [PCDP5]

Dental professionals observe a contrast between the way that patients are willing to trust SCDPs and PCDPs, and represent this as a corollary of social definitions of roles. The location of this difference in the appearance, site and status of SCDPs mirrors the idealisation of hospital clinicians' competence as part of the 'ceremony of the clinic', where they are given attributes solely due to their location and identity as clinicians (Strong and Dingwall 2001). In addition to idealised attributes, Strong notes that time is a significant factor in the presentation of biomedical interactions (pp. 150-152). Time is certainly important in the delivery of primary care dentistry (Hill *et al.* 2008), and so PCDP treatment may seem '*rapid, focussed and above all, impersonal*' (Strong and Dingwall 2001, p. 152) compared to that provided in SCSCs. This may subsequently threaten the relationship between PCDPs and

¹¹⁵ By specialist I am not asserting that Jack thinks SCDPs are specialists in the sense of the professional title recognised by the GDC (GDC 2011), more that they have a particular focus.

anxious patients. As Thomas (p. 178) illustrates, SCSCs not only communicate messages of safety to entice patients into attending dentists in the future, but inadvertently exaggerate the difference between secondary and primary care practices. Like the difference between conscious states that sedation produces, the difference of physical location may prevent SCSC attributes from being generally applied, so that rather than re-constructing their perceptions of dentistry-in-general, patients view SCDPs as categorically different from PCDPs. Despite the risk of adversely selecting students (see Chapter Seven), SCSCs may be seen as places run by specialists or ‘better’ dentists where clinicians take more care. This contrast reinforces patients’ beliefs that attending a PCDP would be settling for second-best in terms of both care and personal safety, the consequence of which is a dependency upon SCSCs as the *only* places they can be treated.

The representation of SCDPs as ‘specialist’ or ‘better’ was *not* reproduced by SCDPs themselves, who categorically denied any specialist nature of either their dental or sedation provision¹¹⁶. The dentistry provided within SCSCs is not seen by them as more specialist than that provided within primary care.

The dentistry we do for our patients is not difficult. You don’t need to be a consultant in restorative dentistry to see the patients we are managing, definitely not. It is standard, bog standard treatment really. [SCDP11]

I see sedation as not being by any means a ‘specialist’ provision. I feel it should be part of pain and anxiety control as standard. It’s an adjunct. So I don’t even perceive what I call “sedation practices”. [SCDP3]

The location of sedation within SCSCs is thought by SCDPs to affect dependency not just because of the clinics’ perceived quality and safety, but because of an imputed status that patients may claim through attendance.

¹¹⁶ Although, as discussed in Chapter Seven, this normalising of sedation may be part of their boundary work to keep sedation accessible to dentists rather than monopolised by anaesthetists.

I certainly don't believe in special sedation centres. I don't think it's in the best interests of dentistry for sedation to be seen as outside of 'normal'. It brings issues if sedation is perceived by patients as special. It is all part of the GA belief- that they have to go to a hospital or specialist centre. The setting has an impact on patients' perceptions- it's different, special, not part of normal experience. [SCDP8]

It becomes almost a badge of honour for patients I think: that they are so bad that they have to come here and be fixed. At the moment it seems to be that everyone wants to be famous. That is the pinnacle of everyone's ambition- just to be famous. One way you can achieve that is by having something that is so severe that you have to go to a certain clinic...If you're sitting around a pub table discussing the dentist and you all have your horror stories, it's a bit of a trump card "I'm sooo bad that I have to go to the hospital and have a needle in my hand and be knocked out!". It's definitely a show stopper at the pub- there's not much that can outdo that! [SCDP14]

By isolating sedation from primary care dental settings, SCSCs perceive a risk of making treatment special and thereby affecting the identity of patients by making them into medical celebrities. By discussing patients' sedation needs in this manner, SCDP14 constructs some patients as potential malingerers, thereby reflecting aspects of Parsons' 'sick role' (1951). Parsons discussed illness as a form of 'deviant behaviour' (p. 452) which prevented individuals fulfilling their social roles. Sick individuals are given a 'sick role' (p. 455) with attendant rights and obligations. They are exempt from social expectations of daily activities (e.g. going to work) and from responsibility for their condition. However they are also obliged to seek to get well again, and to co-operate with clinicians to achieve this aim. The sick role developed from a context of doctors' awareness that patients might have incentives to be sick, and that such incentives can involve both the aetiology and on-going maintenance of a condition through resistance to intervention (Parsons 1975). From this perspective, sedation need is perceived by SCDP14 as a social tool for managing general status rather than a legitimate medical requirement. Despite seeking professional help, accessing the sick role is not guaranteed or clear-cut for patients (Nettleton 2006b). The ascription of status through attendance that SCDPs fear was not reflected in the accounts of treatment that patients reported.

Although Turner discussed liminality as a transitional phenomenon (Turner 1969 [1995]), he noted that in post-industrial societies liminality can take two further forms. For some individuals liminality can become a permanent state, where they remove themselves from their usual social structures without undergoing a transformative journey back into society afterwards (Turner 1974). In addition, some events such as reunions, concerts and sports matches are liminoid cul-de-sac experiences. These occasions are not socially expected or required, but optional activities from which participants return unchanged (Turner 1974, 1977, 1979, 1982). Although SCSC attendance can be transformative, like Carlone's (2006) management guru, there is a question about whether the content and process of sedation '*perpetuates liminoidity as an ongoing endeavour*' (p. 94) where treatment becomes a liminoid event for permanently liminal patients.

Some patients travel away from their local communities and divest themselves of their 'everyday' identities to become patients of SCSCs, but without returning transformed in their orientation towards dentistry. Instead the hospital becomes the '*only place*' [Thomas] that they '*always come to*' [SCDP12]. They do not anticipate becoming able to engage with dentistry in the primary care setting, but are happy to exist in a permanent liminal state- without a family dentist yet receiving dentistry physically removed from their communities. Even for those patients who *do* feel able to attend PCDPs for checkups prior to re-referral for treatment, the theatrical nature of performing sedation may also mean that for them it is more akin to a 'liminoid' event - opted into as an event but still ultimately impotent in its ability to change their outlook.

This dependency is not only focussed upon the treatment location but also its modality. As Thomas illustrates, patients may stop avoiding dentistry, but only have '*treatment done as long as [they're] sedated*' (p. 224). Whilst SCSCs are very

different environments from primary care, they still have aspects which are reminiscent of those settings. Chairs, cabinetry, dental instruments and materials are all similar, but one element which *is* fundamentally different from primary practice is the sedation they provide.

8.6.2 Depending on the Sedative

Sedation is a seldom-used, and therefore unusual, modality in primary care (Burke *et al.* 2005; Chadwick *et al.* 2006; Edmunds and Rosen 1989; Foley 2002; Hill *et al.* 2008; Whiston *et al.* 1998). Attributing successful treatment to this atypical element was seen as a pyrrhic victory by SCDPs, achieving one of the clinics' aims at the expense of another.

In a way the sedation works against you...because they can then attribute their success to the drug and not to their improved coping. [SCDP14]

The externally introduced sedative may be seen as the essential component to successful treatment, rather than patients' own capacities to manage. If so, then although it will facilitate dental treatment it is also likely to inhibit rehabilitation to PCDPs who don't have this resource. The contrast between relying upon external or internal resources was commonly reported in SCDPs' discussions of patients' *willingness* to move beyond sedation reliance. By providing a drug-facilitated pathway to dental care, not only is there an alternative to self-reliance, there is an incentive *not* to attempt 'normal' treatment.

my experience has been that once a patient has experienced sedation they like it. It is a nice way of having dental treatment. They are then loath to put the effort, effectively into trying to have treatment done conventionally. I am sure that if I had a treatment done with intravenous sedation that is the only way forward. You know once you have tasted Dom Pérignon are you going to drink your regular champagne? Probably not. [SCDP11]

a lot of patients can't be bothered with having 30 visits with a psychiatrist or a psychologist, what they want is to come in, have an armful of juice and then get back to work. [SCDP13]

Dependence is not generated in everyone. Patients do stop requiring sedation for treatment (Wallace 2006), but reliance upon sedation is one of the SCSCs' perceived 'moral hazards' (Guston 1999, 2001). By providing a service, patients are seen as able to depend on it and delegate responsibility to the SCDPs. Rather than acting to address their underlying anxiety through '*visits with a psychiatrist or a psychologist*', such patients are perceived as giving in to their ambivalence and instead avoiding their anxiety by seeking to '*sleep through it* (the dental care)' (Abrahamsson *et al.* 2002b, p. 661). In this way, such patients demonstrate a '*weak intersection*' (Tovey and Adams 2001, p. 703) with SCDPs, appropriating sedation for their own agenda. The 'Dom Pérignon' of sedation provides such a good experience that SCSCs provide '*an incentive to...shirk*' (Guston 1999, p. 92) the psychological effort required to address the underlying dental anxiety preventing primary care attendance.

Such an approach, which views dependence as a moral problem of not putting in effort to move beyond sedation, or using it as a 'badge of honour' as described earlier, denies patients access to a legitimate role. By challenging patients' reliance upon SCSCs to access care, SCDPs categorise them as malingerers rather than rightfully seeking help through the medium of sedation. This tension reflects criticisms of Parsons' (1951) 'sick role'¹¹⁷. Whilst acute illness in some individuals might reflect the rights and obligations Parsons outlined, other conditions do not fit such a model (Nettleton 2006b). In chronic conditions such as anxiety some of the

¹¹⁷ For examples of early critiques and discussions of the sick roles general applicability see Levine and Koziuff (1978); Segall (1976).

obligations are conditional¹¹⁸, whilst others are affected by individuals' social situations. Anxious patients may view themselves as legitimately seeking help by accessing health care within SCSCs. By doing so they are meeting their obligations to prevent dental disease as instead of completely avoiding dentistry they are subjecting themselves to the '*dental gaze*' (Nettleton 1992, p. 41). However clinicians perceive the same behaviour as avoiding the obligation to get better, thereby holding them responsible for their anxiety. The perceived unwillingness of patients to move beyond a successful approach reflects not only their feeling of a legitimate status, but also their invested knowledge in the sedation standardised package (Carlile 2002). Having spent time and energy finding a way to successfully solve their dental problems, patients understandably prefer to rely upon it as a way of making treatment 'do-able' (Fujimura 1987) than start again finding a new approach. They find it difficult to adopt the view of the SCDPs they depend on that it would be better to remove the fear than to suspend it via sedation, because doing so would incur further psychological and financial costs for themselves¹¹⁹.

In addition to the atypical nature of SCDP treatment that sedation modalities create, IV patients' inability to acquire memories of the difference between expectation and experience may also be important. Reflecting the paucity of literature on sedations' efficacy at anxiety removal (Adair *et al.* 2003), there is a lack of quality evidence to either support or dispute a link between modality and subsequent dependency. However the impression reported by one group of experienced SCDPs in the U.S. was that patients could wean themselves off nitrous oxide, but few IV midazolam

¹¹⁸ For example, an obligation on patients with type 1 diabetes to 'get better' is clearly unrealistic, although an obligation to manage their condition by complying with advice on lifestyle, attending diabetic clinics and managing their glucose levels by adhering to medicinal regimes would conditionally meet the general aim of such an obligation (Parsons 1975).

¹¹⁹ Although the cost of secondary care sedation is borne by the NHS, attendance does incur travel expenses for patients. Attendance at private psychological services would incur significantly greater costs for patients.

patients ever became regular PCDP attendees (Milgrom and Weinstein 1993)¹²⁰. SCDPs in this study also reported ambivalence about the effects of midazolam. The anterograde amnesia it provides (Merritt *et al.* 2005) was recognised as a ‘two-edged sword’ [SCDP8]. Whilst it might be useful to obscure potentially traumatic aspects of treatment¹²¹, the lack of recall was also seen as a disadvantage.

Midazolam causes amnesia, so they assume they have been unconscious. They think if they were conscious they would have remembered, so they assume they've been asleep whilst things have been going on. [SCDP8]

they're not really gaining anything from remembering that they were fine because they've forgotten that they were okay. [SCDP1]

Without any memory of treatment, patients are unable to update their beliefs about dentistry. Despite having been conscious and cooperative they assume that they have been unconscious. Although SCDPs seek to overcome this side-effect by providing ‘memories’ (see Chapter six pp. 172-174), this concern was also confirmed by the PCDPs receiving discharged patients.

With inhalation sedation, they know what's going on– they know the sensations, and so it is not completely alien to them when I carry out treatments, so it's easier for me. Whereas the IV [midazolam] patients don't seem to remember that much– they are not necessarily de-sensitised, they've just had the treatment and they haven't realised what they've had done and so can sometimes be just as nervous...I'd say most IV patients struggle then to have, perhaps are not as receptive to have treatment with me just with local anaesthetic because it's a bit like “what's changed?, what's different?, I was asleep while I had that done so I'm still officially really nervous”. [PCDP2]

PCDP2's experience confirms that of Milgrom and Weinstein (1993) that patients who experience treatment under inhalation sedation with nitrous oxide find it easier to rehabilitate to primary care dentistry as they have gained knowledge of clinical

¹²⁰ Care must be taken with this assertion, as it was an impression gained from years of practice rather than a prospective cohort study. In contrast, the only patient participant within *this* study willing to consider attending a PCDP for future dental care (other than check-ups prior to re-referral), had received all their treatment with the aid of intravenous midazolam.

¹²¹ Such as a surgical wisdom tooth extraction.

dentistry within SCSCs. In contrast, patients who have had IV midazolam cannot see 'what's changed'. Being sedated is a liminal experience, neither fully aware nor unconscious. Turner proposed 'cunicular', meaning 'being in a tunnel', as an alternative word for liminal (1974; 1982) due to its '*hidden nature and its sometimes mysterious darkness*' (Turner 1974, p. 232) and potentially protracted status (Turner 1982). Such a definition is exemplified by intravenous midazolam, as patients are physically changed whilst mentally in a tunnel. By preventing patients from acquiring any new knowledge about the provision of dentistry, treatment with intravenous midazolam may be a liminoid event which they participate in but return to their social worlds subsequently unchanged.

As clinical boundary organisations, SCSCs use the standardised package of sedation to achieve their aims. Research involving standardised packages' plastic component of boundary objects has generally focused upon their ability to bridge social worlds by meeting their respective needs¹²². However, by *failing* to satisfy the informational demands of different worlds, they can also be impediments to interaction. Discursive and historical examinations show their use to confuse and retard interaction (Fox 2011; Oswick and Robertson 2009), acting as '*roadblocks*' (Carlile 2002, p. 451), "*barricades*' and '*mazes*'" (Oswick and Robertson 2009, p. 190) through syntactic, semantic and pragmatic differences¹²³ (Carlile 2002). Non-textual boundary objects such as '*technologies, methods, and rules of thumb*' (Carlile 2002, p. 446) have embedded information which speaks for itself (Carlile 2002; Fox 2011). Technologies such as sedation therefore convey information which affects the outcome of their use. Fox's (2011) historical analysis of Joseph Lister's carbolic spray demonstrates that successful use is dependent upon

¹²² See for example Star and Greisemer's original discussion of boundary objects used to facilitate different parties involved with a museum (Star and Greisemer 1989). Syntactic differences are a lack of common language, semantic differences are a lack of common meaning of language, and pragmatic differences are a lack of common practice (Carlile 2002).

interpretation rather than actual underlying action. Whether nineteenth century surgeons believed asepsis negated a miasmatic or germ theory of infection was irrelevant to its uptake as it addressed both. What *was* important was its *meaning* for them. Asepsis made surgeons the protectors of moral and physical cleanliness, whereas Lister's failed antiseptics aimed to compensate for surgeons' contamination of patients. Likewise, the underlying educational and service provision aims of SCSCs are both addressed by sedation provision. What is more relevant to the outcome of its use is the attributed meaning given to it by patients. If clinicians are correct in their assessment, sedation leads to rehabilitation or dependency because of patients' beliefs about their personal responsibility in managing their anxiety rather than sedations' role in temporarily obliterating it. Such a view makes their sick role obligation one of trying to 'get better' rather than 'seek help'. Personal responsibility was only addressed by Olivia, who was the one patient who expressed a willingness to subsequently attend PCDPs for future dental care. All other patients discussed their anxiety solely in terms of their need of SCSCs and sedation's ability to overcome it. Although sedation has replaced DGA as the pharmacological treatment modality of choice (DoH 2000; Seward 1998), patients' discussion of sedation as 'going to sleep' indicates that their understanding of its use is still along similar lines. Whilst not unsafe in the manner that Martin (1999) anticipated, the underlying question of his letter is still pertinent: Is sedation a general anaesthesia analogue? For most dentists, sedation is seen as the bridge which potentially leads patients to engage with dentistry. However if it is perceived by patients as a safer version of DGA- an avoidant memory-less event, then it impedes future interaction by developing dependency and becomes a roadblock instead.

8.6.3 Reacting to Discharge

As discussed earlier, part of the process of providing treatment is to discharge patients after completion of the treatment plan to prevent the moral hazard of dependency. In addition to freeing capacity and preventing waiting lists from becoming 'clogged' [SCDP6] (p. 209), discharge reinforces SCSCs' secondary care role and manages patients' identities by denying patients the ability to claim any 'special' status as 'hospital sedation patients'. Whilst it provides an opportunity for rehabilitation by patients '*getting themselves back out there*' [SCDP1] (p. 211), for those who feel that SCSCs are the only way they can tolerate treatment it creates confusion and dismay. SCDPs ideally wished to discharge patients to sedation-providing PCDPs, feeling that abrupt discharge without a supportive destination was '*slightly unkind*' [SCDP2] (p. 212). Confirming this perception, discharged patients reflect some of the responses of rejection, anger and sadness that clients feel when psychotherapy ends (Jacobs 1999). Whilst such endings have the potential to encourage empowerment and autonomy, they can also lead to feelings of abandonment and distress as they disrupt the patients' solution to their anxiety.

"You've put me back into a nightmare that I don't want to be in", I felt like saying. But she was quite adamant [that I was to be discharged]. I didn't say anything, I just looked out the window and thought "oh no – I might as well have my teeth out"... I thought "well do I get a say, is there something I can do, or do I just go back to what it was – have another appointment and manage to get referred back and it all goes on again". [Eve]

basically you get the impression that "right, well, you're off the books now"...that when you finish your course of treatment that's it, now they're done with you and that's at an end, rather than "if there are problems in the future we might be treating you again", you know? [Jack]

The reported confusion and anxiety produced by discharge illustrates recent discussions of boundary objects (Fox 2011; Oswick and Robertson 2009) reported earlier. The discrepancy between the attributed purposes of SCSCs as sites of service access and a means of rehabilitation creates confusion and distress in

patients, who do not anticipate being, nor wish to be, discharged. Whilst they do not reject sedation technology in the way that surgeons rejected carbolic spray, they do reject the process, their resistance showing that their attendance is not viewed as a short-term engagement. From a rehabilitative perspective, this wish to attend SCSCs is an ironic outcome as patients do not so much seek to engage with dentistry as avoid engaging with primary care dentistry.

The dual purpose of treatment and influence that SCSCs contain illustrates the disciplinary power of dentistry (Nettleton 1992). In her genealogical study Nettleton examined dental practise and discourse, demonstrating how *'dentistry serves as an ideal and tangible exemplar of disciplinary power'* (p. 106) which controls through knowledge. Anxious individuals disrupt the routine exercise of surveillance through their avoidance thereby ironically ensuring their inclusion in the *'dental gaze'* (p. 41) by stimulating interest and the *'listening gaze'* (p. 75) of research. As discussed in Chapter Four and earlier in this chapter, patients who attend SCSCs **do** submit themselves to the dental gaze of SCDPs and the students they delegate to, however the intention of disciplining them through attendance to place themselves within the continuing gaze of PCDPs is resisted upon discharge. As Nettleton notes, *'[disciplinary power is] most immediate and most visible where there is resistance'* (p. 115).

Eve and Jack's language clearly shows that discharge is seen by patients as an imposition rather the collaboratively agreed joint venture (Strong 1979; Strong and Dingwall 2001) of 'generous constraint' (Gomart 2002). Jack does not recall a supportive approach and instead reports feelings of abrupt disposal, whilst Eve sees discharge as being sent back to the beginning of a laborious process of re-referral. Her account reflects her displeasure with the SCDP's decision. Her reported body language of avoiding eye-contact by looking out of the window, conforms to some of

the ceremony of the clinic (Strong 1979; Strong and Dingwall 2001). Direct challenges to clinicians' decisions are rare, emotionally tense, and threaten the clinical social occasion. Patients' disagreement with medical decisions are therefore not often overtly expressed, but instead done indirectly with other staff (or researchers!), or through such para-language as Eve reports (Strong and Dingwall 2001). By failing to look at the SCDP, Eve obliquely challenges their decision rather than openly (dis)agreeing with it. Whilst such actions register protest, they rely on clinicians choosing to reference the signalled disagreement in order for it to be discussed. Clinicians generally control the ability to talk and the topic of clinical talk's focus (pp. 135-143), and as a consequence such protests are ineffective as they do not remove the clinicians' authority regarding the decision. Not all disagreements are handled this way. SCDPs reported that, like Strong' observations, whilst in most final consultations '*strong emotions were suppressed*' (p.149) patients did sometimes overtly challenge medical authority.

Some patients were quite angry. Some were "we've been coming here for years", "No dentist wants to see me", "dentists are not taking on patients" and things like that. So you have to explain to them that they can contact the NHS helpline: "they will tell you which dentists in your area are taking on patients, we will still see you again if we need to", I think you have to reassure them that if they do need sedation it is still available for them to have. [SCDP9]

Whether PCDPs actually *are* unwilling to accept patients is less pertinent to dependence than patients' *reported belief* that it is the case. Such tropes may be a way of them accounting for their resistance to relinquish their patient role and become autonomous of SCSCs. Anxious patients may be relying on the external moral authority of a lack of alternative options to overcome the SCDPs' authority to discharge.

Alternatively, the placement of the locus of control externally in the unaccepting PCDPs and the discharging SCDPs is a move consistent with the low internal or

high external locus of control correlated with dental anxiety (Poulton *et al.* 2001). Patients may be exhibiting a degree of *'learned helplessness'* (Seligman and Maier 1967, p. 8). Overcoming learned helplessness requires the experience of agency. This may be initially motivated by an external source inducing, encouraging and goading until subsequently experienced agency can start to develop an internal impetus. For treatment of anxious patients to have a permanent effect, both the noxious stimuli and their passivity must stop. Whilst sedation removes anxiety and makes the dental stimuli less noxious, it is a much more mentally passive experience than receiving treatment under local anaesthesia alone, therefore internal agency is not experienced and any success in engaging with dentistry may be attributed *'to the drug and not to their improved coping'* [SCDP14] (p. 231).

Although attending SCSCs has the potential to change patients' views of dentistry so that subsequent attendance at a PCDP is possible, the moral hazard of developing dependency upon either sedation or providing SCSCs is also a possible outcome. Though managed by SCDPs through discharge, for patients such a relationship creates a new vicious cycle of sedation use.

8.6 The Sedation Vicious Circle

The cyclic process of PCDP referral to SCSCs, SCDP assessment and acceptance, liminoid treatment within SCSCs, and eventual discharge back to the PCDP has the potential to become another 'vicious cycle' (Armfield *et al.* 2007; Berggren 1993) of dental anxiety (Figure 8.2).

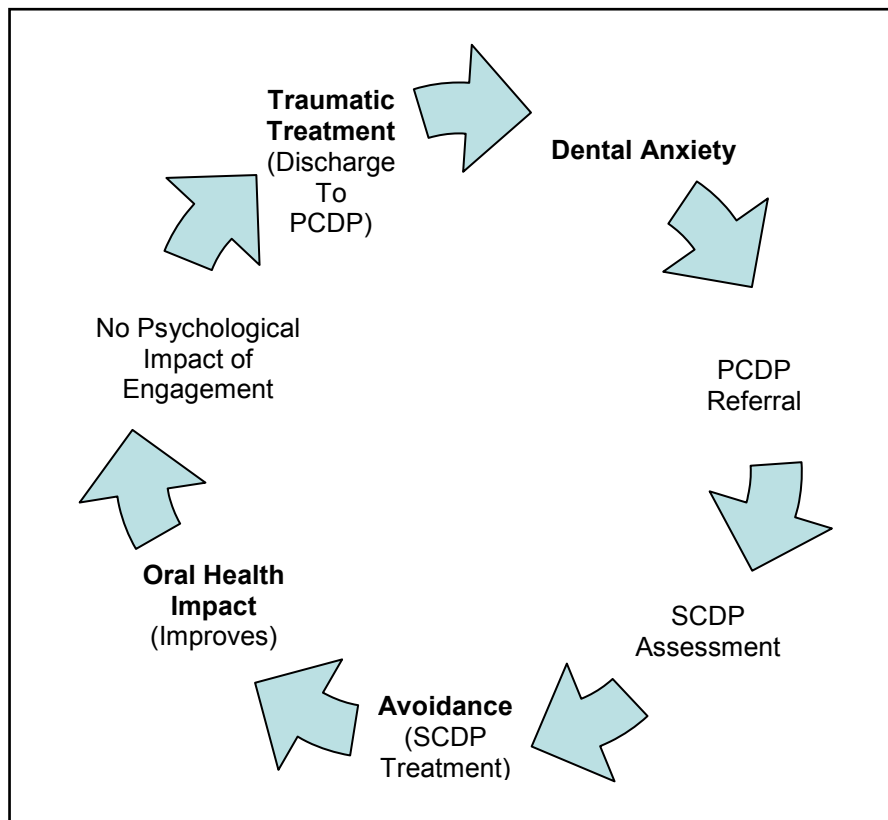


Figure 8.2 The sedation vicious cycle

This sedation cycle was recognised by Levitt *et al.* (1999), who felt that for patients treated with intravenous sedation

'[i]t plays no role in helping the patient develop the skills to manage their own anxiety and consequently places a patient in a vicious circle of drug dependency for regular dental care (pp.487-488).

Such a cycle follows a similar pattern to the traditional cyclic model of anxiety, involving the four described elements of dental anxiety, avoidance, oral health impact and traumatic treatment (shown in bold), but introduces more intermediary stages. As with the model discussed by Berggren (1993) and Armfield *et al.* (2007), anxiety leads to avoidance which ultimately leads to traumatic treatment which continues patients' anxiety. The avoidance is mental rather than physical though, caused by the cunicular sedation, and leads to an improvement rather than deterioration in oral health as it enables patients to undergo dental treatment. As treatment for some patients is not a psychologically transformative event they reach

the end of their treatment plan and are discharged to PCDPs who, in contrast to SCSCs, still represent a traumatic experience for them. This process was recognised by SCDPs who saw patients regularly coming back through the referral system.

Some of them you know that as soon as you discharge they are back in within three months. [SCDP9]

I could just see that if she ever needed anything again, she would be straight back here. [Discharge was not pointless, because it is giving her the chance to get on her own two feet again, and perhaps in six months she'll go back and have a check up, and think "okay, I need a little filling, perhaps I'll give it a go", but I don't know – I could just see her being referred back, see the process just going on. [SCDP5]

Although SCDP5 reflects the optimistic view that discharge provides an opportunity to try and attend a PCDP, like SCDP9 they also report a more resigned reading of their patients. They don't know for certain, but they predict the cycle 'just going on', with re-referral after a few months. Although this form of patient engagement does meet the service provision aims of the clinic (see Chapter Four pp. 121-123), there was a perceived disadvantage to this cyclic process, as it places patients' treatment outside of SCDPs' control. External influences have the potential to affect patients, and if this is adverse then any move towards the rehabilitative aims of SCSCs may be consequently frustrated.

I think the negative side to [discharge] is [patients] again go back to having the same dentist. Going back to a dentist who possibly had the problem before, but didn't have a rapport with them, may push them back, their confidence down again, so it may end up being quite cyclical. [SCDP10]

I have seen several patients who have gone back in terms of their dental phobias and end up coming back to us for that reason. They were discharged for genuine, you know quite happy, but then they spend a couple of times with [a PCDP] and all their phobias and anxieties return. [SCDP12]

The process of dental engagement followed by discharge creates a situation where external clinicians have the potential to undo any progress patients make in overcoming their anxiety. The impact of the clinic is limited and contingent upon

further positive experiences, demonstrating the socially constructed nature of identity (Mead 1934). The way in which patients perceive themselves and their needs is affected by the interactions they have with others. Within SCSCs, patients are able to engage with dentistry in a certain manner. Outside of SCSCs such engagement may be able to continue, but may not and depends entirely upon the specific situation they find themselves in. Much as an audience might leave a performance of an inspirational story with the intent to be more like the protagonists but remain unchanged the next day as they re-engage with their normal lives, the awareness of some sedation patients of being changed by their experience of the performance of sedation treatment may also be short lived once they return to being treated by PCDPs¹²⁴.

8.8 Conclusion

This chapter explored the outcome for patients of attending a SCSC. The clinic provides an opportunity to explore the liminal nature of medical work, and the boundary organisation and boundary objects at the frontier between 'lay' and clinical worlds.

Treatment within SCSCs is a transformative experience for patients. It physically changes them and offers the potential to gain experiential knowledge of dentistry so that they can subsequently attend PCDPs. The trust which develops in dentistry as a result of the mediating SCSC clinicians illustrates the usefulness of extending the boundary organisation concept from its origins at the science:policy interface to the lay:professional interface. Its role as a boundary organisation promotes the building

¹²⁴ This is not, of course to say that PCDPs universally create phobia. Just that PCDP treatment of patients is out of SCDPs' control, and that some patients have experienced setbacks as a result of subsequent treatment.

of a trusting relationship between different social worlds by bringing them together¹²⁵ in face-to-face engagements and aiming to facilitate this interaction through clear communication. Such functions are only partially achieved, due to the embedded information communicated about its constituent technology. Reflecting recent discussions of the ambivalent nature of boundary objects (Carlile 2002; Fox 2011; Oswick and Robertson 2009), engagement with SCSCs, and the use of their sedative standardised packages, may either facilitate patients' involvements with dentistry through the extension of trust, or inhibit and block future interaction through the development of dependence. Such outcomes depend on the attributed meaning of the sedation experience. Whilst intended by SCDPs as a temporary influencing and mediating environment located between attending patients and referring PCDPs, SCSCs are not entirely successful at remaining as either a temporary engagement *or* permanently influencing attendant patients. By initially replacing the adverse selection risk of attending PCDPs they create the moral hazard of dependence. Rather than being transformed, patients attend for cunicular events. Like other performances, patients' participation is liminoid- a non-transformative experience rather than a changing process. Such dependency reflects the vicious cycle of dental anxiety by becoming an alternative cycle of dental sedation.

Nettleton (1992, p. 65) notes in her discussion of pain and fear in dentistry, that dental practices seeking to eliminate fear paradoxically perpetuate it. Although her discussion is highlighting the objectification of 'fear' through discourse, such self-creation is also true in praxis. By providing sedation in SCSCs, the general practice environment is highlighted as comparably unsafe and patients' dissociation during treatment provides a way of having dentistry in an avoidant manner. The use of

¹²⁵ SCSC contain PCDPs both in a virtual *per procurationem* form, due to their referral, and also physically through some SCDPs' dual roles.

sedation to address patients' felt *'threat to independence and autonomy'* (Abrahamsson *et al.* 2002a, p. 191) is ironic, as the amelioration of such fear and the development of trust, may directly lead to a loss of autonomy and independence through the creation of dependency upon sedation and the clinic it is provided in.

Having explored the purpose, processes and outcomes of treating anxious adults within SCSCs, the following chapter concludes this study by drawing these analyses together to demonstrate SCSCs' embodiment of a social structure- the clinical parlour.

Chapter Nine - Conclusions and Reflections

(The Clinical Parlour)

...Welcome the coming, speed the going guest.

(The Odyssey: Homer)

"Will you walk into my parlour?" said the Spider to the Fly,

"'Tis the prettiest little parlour that ever you did spy;

The way into my parlour is up a winding stair,

And I've a many curious things to shew when you are there..."

(The Spider and the Fly: Mary Howitt, 1829)

9.1 Introduction

This thesis outlines a qualitative study exploring the work of providing sedation for anxious adults within secondary care dental settings. Whilst dentistry has generally neglected qualitative investigations (Colquitt 2011), Exley (2009) notes that social science has not developed a strong research history around dentistry and the sociology of the mouth, preferring other aspects of medical work and the body instead. In addition, the sociology of health and illness has been challenged to move beyond a portrayal of clinicians as either altruistic or a powerful elite, to develop a more compassionate analysis of biomedical work (Graham 2006). This research has sought to address these identified gaps in dental and social science research. It examines an aspect of dentistry using sociological and anthropological tools, and contributes to a potential third wave within medical sociology which develops a more compassionate sociology of biomedical practice by attending to the humanity of

clinicians, especially the previously absent emotional impact of biomedical work (Graham 2006; Nettleton *et al.* 2008; Watt *et al.* 2008).

By analysing data from referring, treating and attending participants I have explored the social meanings and consequent processes that exist within SCSCs. In the previous five chapters the analysis of key findings regarding the purposes, processes and outcomes of SCSCs were discussed. This chapter reflects upon the findings of this thesis, synthesising the results and examining them in the light of another intentional, temporary and 'territorial' space- the parlour. The first part of the chapter summarises the role of the domestic parlour before examining the functions of such spaces to demonstrate their manifestation within SCSCs' clinical environments. The second section of this chapter reflects upon the research process undertaken, before outlining the significance and implications of the study's findings and proposing areas of further research and development.

9.2 The Domestic Parlour

The domestic parlour (or 'drawing room') originated within cenobitic institutions as a place of purposeful interaction and the receiving of visitors (Britton *et al.* 1838; OED 2009). This intentional space subsequently became part of domestic settings (Edwards 2005), and later developed to be a room in any building, especially a house, where guests were received (OED 2009). The formal call was the *raison d'être* of the parlour and its inherent rituals (Grier 1988). Within Victorian society, callers on homes presented their cards to the butler and, if deemed acceptable by the owner, would subsequently be received for a formal call within the parlour (Davidoff 1973). As the most public part of the house for visitors it was the best room and was specifically set aside for such encounters rather than for housing everyday life (Campbell 1997; Edwards 2005; Grier 1988; Logan 2001; Olsen 1999;

Stabile 2004). Parlours were sites where visitors were temporarily hosted for specific social events; conversation and ‘parley’ were undertaken; performances were made; and influence was exerted upon visitors through environmental aspects (Flanders 2004; Grier 1988; Spigel 1997).

9.3 The ‘Parlour’

This thesis develops current knowledge of how social worlds interact within biomedical settings. The interaction of social worlds within a particular clinical setting reflects the processes described in the domestic parlour. Like Armstrong’s (1983) and Foucault’s (1963 [2003]) objects of analysis¹²⁶, the Parlour is both a social and a physical space. This thesis suggests the clinical Parlour as a form of healthcare delivery that has several separate but interlinked activities and roles. The main process at work within the Parlour is ‘hosting’ patients for treatment. The Parlour’s owners, the staff who work there, receive visiting patients within its environment for temporary purposeful interaction. By intentionally hosting patients, Parlours become sites for the ‘performance’ of biomedicine with the aim of influencing them. The Parlour’s hosting role makes it a site of liminality and transience. Much as a caller left cards to be evaluated for worthiness prior to invitation for a formal call, a patient’s referral letter is also assessed by the consultant in charge to evaluate the appropriateness of an appointment within the clinic¹²⁷. Once deemed suitable to be ‘received’, appropriately referred patients are invited to attend for an assessment appointment and from this encounter a visiting relationship will either commence or terminate.

¹²⁶ This thesis is not Foucaultian, but I use this comparison to demonstrate the physical and social forms of space which these authors also noted.

¹²⁷ The content of referral letters (calling cards) or the process of assessing these as worthy of appointments (invitations) was not part of the scope of this research.

The Parlour demonstrates characteristics of 'boundary organisations', which exist to articulate a process between two worlds. It convenes parties together in face-to-face situations to promote the building of relationships and trust; translates biomedical resources and information so that they are comprehensible; facilitates co-operation and transparent relationships through clear communication; and ensures that the interests of all involved parties are represented (Cash *et al.* 2003; Tribbia and Moser 2008). It is at the frontier between lay and biomedical worlds, involving their representatives with levels of accountability to each, and it uses treatment modalities which are standardised packages- processes with a stabilised form but a plastic interpretation by their users (Guston 1999, 2001). The Parlour enables the transfer of embodied information between worlds by conveying the implicit meanings and information contained within the physicality of such things as sedation technology and the environment it is used within.

The Parlour extends the boundary organisation concept, recognising the corollary of Huitema and Turnhout's (2009) assertion that such organisations experience a pull towards advocacy of one side due to their orientation, rather than remaining an impartial '*honest broker*' (Lorenzonia *et al.* 2007, p. 73). From such a perspective, Parlours are tertiary spaces which contain the interaction of separate social worlds, however the boundaries and interests between them and some of their inhabitants are fuzzy (see Figure 9.1).

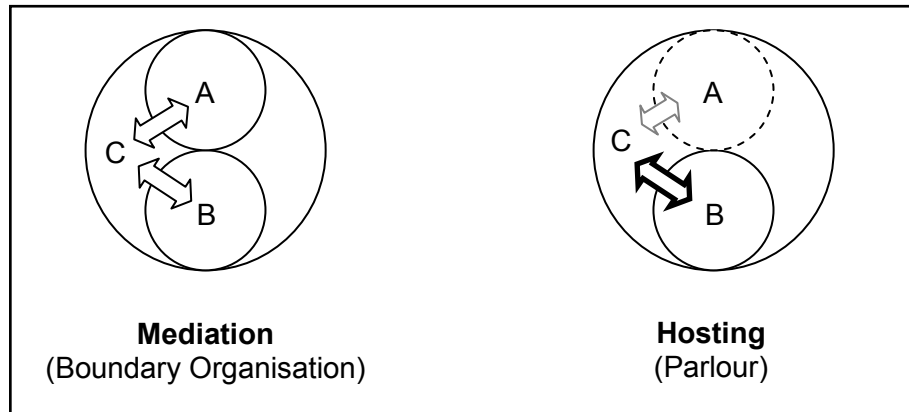


Figure 9.1 The boundary organisation and the Parlour

In Figure 9.1, the models of boundary organisations and Parlours are produced to illustrate the difference. Within ‘classic’ boundary organisations, representatives of the two separate worlds (A & B) are physically contained within an impartial organisation mediated via specialist members (C). There is no sense of bias or ownership regarding their relationship within the organisation, because each has lines of accountability to the mediators so power relationships are equal and both worlds (A & B) co-own the space. Within the Parlour, the boundary between A and C is less robust, as they are both ‘*sub-worlds*’ (Strauss 1978b, p. 123) within the larger social world of biomedicine and one world may be present *per procurationem*. Much like a domestic parlour, which may contain both family and external guests, the work undertaken by Parlour owners is invested in hosting the visiting stranger more than the ally. Although the Parlour’s hosts (C) remain a separate ‘third party’, distinct from both the accommodated worlds, they are quasi-independent as they partially share commitments to action and ideologies with one of the worlds (A). The focus of the Parlour is therefore primarily upon one of the social worlds (B), which is the main world being hosted.

In the same way that domestic parlours developed the tradition of providing spaces for purposeful and intentional interaction, biomedicine also creates such liminal

settings of purposeful interaction in order to facilitate its engagement with the lay 'outside world' of patients. Parlours are not locations of 'everyday' primary care biomedical activity¹²⁸, but are specifically set up as sites where intentional interaction can occur which serves specific functions. Such settings

- temporarily host visiting patients rather than keep them as permanent residents;
- provide safe interaction for patients who might otherwise feel threatened;
- require the performance of an image through the physical and social setting (including the use of emotional labour and physical props); and
- seek to influence long-term behaviour as well as provide a short-term clinical service.

The next section explores this model in more detail by examining SCSCs as a specific manifestation of the concept.

9.4 The SCSC Parlour

The main research question of this thesis (see Figure 1.4, p. 12) was to understand how patients and clinicians engage with conscious sedation within SCSCs. The study highlights the importance of the social nature of sedation provision, and the complexity of its inherent meanings and delivery process. The overall theme that emerged from this research is the hosting role of SCSCs. SCSCs are dental settings specifically created to contain the frontier between the '*abstract system*' (Giddens 1990, p. 80) of dentistry and previously avoidant anxious patients. Following referral, SCDPs receive patients who visit for a specific course of treatment. Chapter Four demonstrated that SCSCs both physically and

¹²⁸ For SCSCs this would be the dentistry which occurs within 'high street' dental practices.

metaphorically accommodate a variety of political, clinical and lay social worlds, with varying educational, service provision and rehabilitative aims. They are quasi-independent, separate from referring PCDPs yet professionally allied, and advocating of PCDPs' long-term rehabilitation objective. As such they illustrate Wilensky's (1967) analysis that mediating '*contact men*' [sic] (p. 10) can have idealistic as well as service-provision motives. As a frontier space, SCSCs are hinterlands to general dentistry, hosting the '*latent sub-world*' (Tovey and Adams 2001, p. 699) of anxious patients within their environment as a form of '*intersectional advocacy*' (Strauss 1978b, p. 123). This receptivity is understandable by considering SCSCs as clinical Parlours.

A subsidiary question of this thesis sought to consider the process of sedation use. Figure 9.2 illustrates the processes described in this thesis which are involved in hosting patients within the SCSC Parlour. Both domestic and clinical parlours are front-stage areas for receptive display to guests which are facilitated by behind-the-scenes activity. Figure 9.2 illustrates the variety of front-stage and back-stage work described in Chapters Five-Seven, which comprise the socially-constructed practise of sedation provision within the clinical Parlour. This chapter looks at the meta-processes that such activity contributes to - hosting visitors, performing for an audience and influencing SCSC inhabitants.

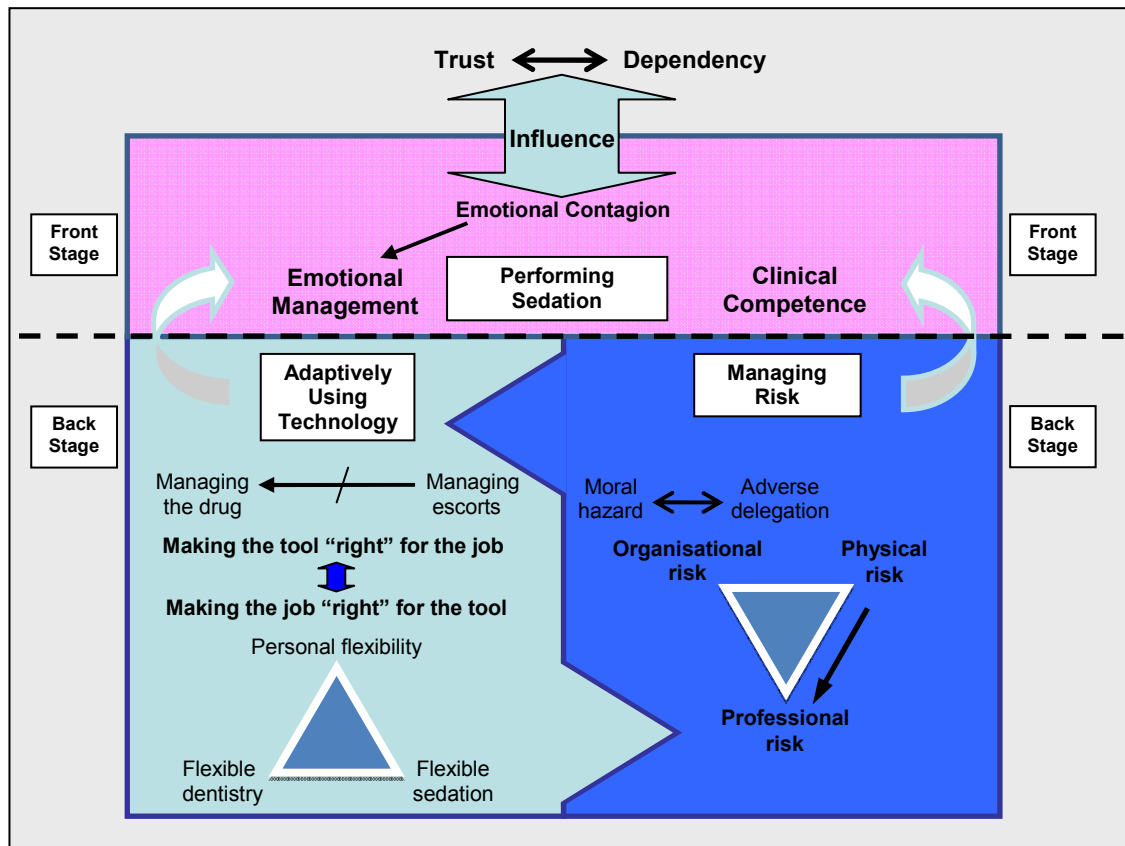


Figure 9.2 The SCSC Parlour

9.4.1 Hosting Visitors

As the public part of a private dwelling, the parlour was a liminal area on the threshold *'betwixt and between'* (Turner 1969 [1995], p. 95) the outside world of the visitor and the inner domestic world of the house. In keeping with its liminal status, it was a ceremonial space set aside as the location for social conventions and rituals such as the formal call (Edwards 2005; Grier 1988). The parlour was not a place for spending time with one's companions and confidants¹²⁹, but was where individuals who were socially obliged to engage met with each other.

The ceremonial behaviour required for 'rites-of-passage' (such as proposals, marriages, funerals etc.) also governed the formal calls made on such occasions

¹²⁹ Close friends might be hosted within the backroom parlour where family members relaxed (Grier 1988).

(Davidoff 1973). Within Victorian society strict rules of etiquette governed the way individuals interacted, and the parlour was no exception. The hosting of visitors within the parlour was structured rather than open-ended, and calls were short encounters for a specific purpose. During such events, social convention required that potential distractions (such as children or animals) should be left behind, and that guests should not outstay their welcome. Inherent to the concept of hosting, is the idea that guests were transient and not a permanent part of the household: to be received within the parlour meant that one was accommodated for a specific period of time, until one left to go about one's business (Davidoff 1973).

As a Parlour, the SCSC is a liminal space existing at the interface of primary care dentistry and the lay world, seeking to contain both parties' interests. It buffers the interaction that anxious patients have with dentistry by softening and augmenting it through its physical environment and the use of sedation. Although SCSCs have a 'ceremonial order' (Strong 1979; Strong and Dingwall 2001), attending patients are not constrained in their actions by the kinds of social rules that parlour visitors had. Distracting co-attendees are not automatically excluded and as such can affect the visit, disarticulating treatment by disrupting appointments or undermining post-treatment information until they are subsequently excluded from the Parlour by SCDPs. Visits have structure (i.e. a plan for treatment as part of a bigger Treatment Plan), but patients do not feel a social constraint to end the short encounters of each appointment at the completion of treatment. This study identifies the moral hazard of delegation that is inherent in dentistry, and extends it beyond delegating personal responsibility for oral health to one of engaging with wider dental services. From this perspective, patients might metaphorically 'outstay their welcome' by developing a dependent relationship with the clinic. Such an outcome illustrates the difficulty in applying the obligations of the Parsonian sick role (1951) to chronic dental anxiety, as long-term attendance *does* fulfil an obligation to seek help. This

thesis provides evidence of the articulation strategies and ‘generous constraint’ used by SCDPs to manage this risk and persuade patients to reduce their need for sedation. Such approaches aim to progress a trajectory rather than encourage patients to become stuck in an alternative vicious cycle.

The domestic parlour was constructed as a site of interaction involving ‘*mutual deference*’ and ‘*perfect harmony*’ (Andrews 1851, p. 45), which respected individuality and led to free and flowing engagement guided by internal principles of etiquette rather than external uses of power. It provided a receptive environment where the etymologically related concept of ‘parley’ could occur. Parley was a form of truce allowing safe engagement with an adversary (OED 2009), and outside of warfare is synonymous with the modern-day concept of ‘conflict resolution’. It involves engagement between interlocutors in a way which halts displays of power, and is a form of interaction conducted under a banner of safety which seeks to end estrangement. The location of conflict resolution should ideally address matters of privacy, safety, impartiality and equality, and as such should be undertaken within a demonstrably neutral environment (Scott 2009). Hirsch’s (1972) analysis of boundary-spanning roles demonstrated that mediators engaged their employing organisation with non-establishment artists by going out to the artistic community ‘*in the field*’ (p. 650). In contrast, the receptive nature of the domestic parlour meant that parley in such environments necessarily took place in the territory of the hosting party. This potentially threatening environment required ameliorating by the overt presentation of a civilised and refined nature, and the deference, respect and constraint that was performed by hosts emotionally mirrored the physical environment as a facilitative place of engagement with another (Grier 1988). Whilst the dental profession is not an ‘enemy’ in a traditional military sense, the ‘*existential threat*’ (Abrahamsson *et al.* 2002a, p. 190) and lack of trust and security that anxious patients feel from dentists means they may be considered *de facto*

adversaries. Consequently 'parley' is integral to the hosting function of the SCSC. By enabling a face-to-face engagement between representatives of the dental world and anxious patients, SCSCs provide a clear channel of communication through which understanding and trust can be developed (Cash *et al.* 2003; Tribbia and Moser 2008). SCSCs are constrained due to the location-specific nature of sedation treatment, and so are necessarily receptive rather than itinerant. In order to demonstrably address matters of privacy and safety, a '*metaphorical membrane*' (Goffman 1961, p. 65) is created by the clinic environment as part of the overt performance of SCDPs' benign orientation.

Within the domestic parlour, visitors' impressions of the family were influenced by the contact they had with the representative and mediating members. Likewise, impressions of dentistry-as-a-whole are managed through the 'facework' of the treating clinicians. Depending upon patients' subsequent experience, SCSCs can either detract from, or enhance, a trusting relationship between anxious patients and the dental world they represent. Once patients engage with dentistry by attending SCSCs for treatment, previously speculative opinions are subject to experiential information and aspects of dentistry which are daunting by their 'unknown-ness' can be translated and explained in order to normalise them and remove their intimidating power.

This research constructs sedation technology as a standardised package (Fujimura 1988, 1992), the coupling together of recognised methods with a flexibly interpretable ideology. This thesis has corroborated the assertion that their component boundary objects can be physical technologies with embedded meanings (and therefore information), as well as textual or diagrammatic information devices (Fox 2011). It develops analyses that demonstrate their ambivalent nature (Carlile 2002; Fox 2011; Oswick and Robertson 2009) by

exploring how this facilitatory / inhibitory role can flip-flop *within* utilising actors as well as *between* them. Whilst differing agenda are compatible (i.e. providing education and providing treatment) they act as bridges between worlds. However, when the same actors have incommensurate agenda (e.g. accessing treatment and rehabilitating to treatment out of the clinic) their functional role breaks down. Despite this effect, neither referring, treating or experiencing participants rejected the technology as in Fox's (2011) example. Perhaps this is because unlike 18th century surgeons, a feasible alternative does not exist for either party. Instead articulation work has to be undertaken to make the two differing perspectives compatible so that successful work is 'do-able' (Fujimura 1987), and sedation is 'the right tool for the job' (Clarke and Fujimura 1992a).

9.4.2 Performing for an Audience

The hosting role of SCSCs requires a considerable amount of work, and is achieved through the front-stage performances carried out and the back-stage work of sedation use and risk management that make such performances successful. As the location for conversation, engagement and parley, the parlour was more than just a neutral space for such interactions. *'In thinking about the scenic aspect of front, we tend to think of the living-room¹³⁰ in a particular house'* (Goffman 1959 [1990], p. 34) because a fundamental aspect of parlours is the image management which they both contain and contribute to. The parlour was the *'gateway to a home'* (Edwards 2005, p. 158)¹³¹. As a point of contact between visitors and members of the household it was a vulnerable situation rich with the potential to improve or detract from the home owners' public image. By being entertained within the

¹³⁰ The living-room is the 'descendent' of the traditional parlour (Grier 1988; McElroy 2006).

¹³¹ Giddens (1990) uses the concept of 'access points' to describe contact between individuals in a modern society and disembedded 'abstract systems'. To some extent the individual Victorian household was an institution which visitors were not privy to the workings of. By extending his concept, 'the household' might also be considered to be a form of abstract system, with access points to the outside world, one of which would be the parlour.

parlour, visitors were privy to aspects of their hosts' lives and therefore able to make judgements about them which they could previously only speculate about. Visits therefore required theatrical management to present particular images in order not to detract from public façades, and the parlour was intimately involved in the presentation and formation of both the guests' and the hosts' social identities (Grier 1988; Spigel 1997).

The parlour *mise-en-scène* was stage-managed through the arrangement of furniture, decoration and ornamentation in order to provide receptivity to guests, enhance interaction and conversation, guide the room's perception and demonstrate culture and taste (Edwards 2005). The basic elements that identified a parlour¹³² were embellished with a variety of objects of functional and aesthetic significance which illustrated a family's particular character (Flanders 2004; Logan 2001). These were, in essence, rhetorical statements placed within the parlour to serve multiple functions and convey multiple messages (Grier 1988). The loaded social meaning of such items spoke about their owners, symbolising their moral values, interests, aspirations, refinement, and culture (Flanders 2004; Grier 1988)¹³³. The parlour embodied a tension between honest comfort and cultured façade which was inherent to Victorian culture (Grier 1988) and which balanced the acceptance of guests with a belief in the importance of their development. As well as the display of objects, the furnishing of the parlour also required selective concealment. Pianos, beds, windows and shelves were obscured (Edwards 2005; Flanders 2004; Grier 1988; Logan 2001; Sweet 2002), and drapes hid defects and unsightly functional operations, gave privacy, softened unpleasant views and

¹³² Parlours generally contained chairs and 'parlour suites', window drapes, a carpet, a mantelpiece, a centre table, mirrors and a piano (Grier 1988). For further examples see Stabile's description of the best parlour (2004), or Brontë's description of Thornefield's parlour in *Jayne Eyre* (Brontë 1847 [2008]).

¹³³ Flanders (2004) asserts that for this reason Mrs Van Siever notes that the '*appearance of the thing goes for a great deal*' (Trollope 1867 [2004], p. 132) when discussing silver versus plated cutlery in Trollope's '*Last Chronicle of Barse*'.

controlled the physical environment¹³⁴ (Flanders 2004; Grier 1988). By carefully managing the visual messages it conveyed, the whole parlour environment contributed to a '*softening of the world*' (Grier 1988, p. 137) and to its owners' personal performances.

Hosts themselves portrayed an image through both their social engagement and their physical interaction with the parlour environment, and the social kudos of exotic objects within parlours was successfully attributed to them if they could demonstrate competence and familiarity in their use (Grier 1988). By exhibiting social graces and an air of familiarity and refinement, they thereby proclaimed themselves to be as cultured and refined as the environment implied. The importance of self-presentation to parlour life was emphasised by a profusion of etiquette books which educated hosts in how to develop physical and emotional control and demonstrated the tension between appearing refined and being sincere. The demonstration of a well presented manner was felt to be particularly important when those considered sensitive¹³⁵ were present (Grier 1988).

This thesis demonstrates the importance of performance to successfully hosting 'sensitive' patients within the SCSC. As a liminal space at the hinterland of dentistry, SCSCs are the presenting face and receptive place for avoidant patients. This thesis verifies Prior's (1988, 1992) assertions that physical spaces are socially constructed, both influencing and being influenced by their inhabitants. However SCSCs imbued purpose creates a tension for the 'owners' which is absent from Prior's discussion. Conflicting demands between open (teachable) poly-clinics and enclosed (private) sedation settings create a dilemma for SCDPs who are aware of the benefits and constraints both structural forms present and the requirement of

¹³⁴ For example, curtains prevented too much heat entering the room.

¹³⁵ Which in Victorian society primarily meant 'women'.

SCSCs to meet these demands as boundary organisations. The SCSC environment is deliberately arranged to resolve these contrasting needs and facilitate the effect of sedation. The rhetorical statements made through the clinics' 'props' are about the fundamental elements of civilisation and refinement- safety and respect¹³⁶, and SCSCs are adapted to soften and control the environment in order to present them as safe and private dental spaces separate from the rest of the clinic. Radios, partitions, restricted access and screens all provide visible symbols of the '*metaphorical membrane*' (Goffman 1961, p. 65) which exists around such encounters, and control the physical environment in terms of sound and vision. This appearance as places of reduced threat or discomfort are carefully managed façades hiding the reality of dentistry which requires certain actions to achieve its aims¹³⁷.

Self-presentation as an 'ideal' clinician has been explored in the literature for both qualified and learning doctors (see for example Atkinson 1995, 1997; Sinclair 1997; Strong 1979; Strong and Dingwall 2001). This thesis applies this analytic lens to dentistry and shows that demeanour is an essential part of sedation provision. Students' abilities to express care and both competently and confidently interact with their environment conveys messages about them to the patients they host. '*Patients are not likely to trust [clinicians] so implicitly if they have full knowledge of the mistakes which are made*' (Giddens 1990, p. 860), and such displays protect patients' sensibilities from the contingencies of treatment. This thesis provides empirical confirmation of Giddens' (1990) discussion of the importance of facework to develop feelings of trust, as the demonstration of clinical competence affects patients' experience of sedation and their ability to entrust themselves to clinicians'

¹³⁶ See Elias (2000) for discussion of how messages about civilisation are in part messages about safety from violence.

¹³⁷ I.e. irrespective of a patient's sedated state, to anaesthetise a tooth prior to filling it requires an injection via a syringe which pierces the mucosa to dispense a volume of anaesthetic.

care. This study illustrates an aspect of sedation use which is absent from quantitative comparisons of sedative agents- the importance of SCDPs' performance to augment sedation's chemical effects. The display of competent, confident, patient-centred care potentiates the sedation and encourages trust regarding personal threat.

In addition to the competent handling of the Parlour's props to convey an air of familiarity and ability, clinicians' performances necessitate the management of both patients' and their own emotions. Until recently (see for example Nettleton *et al.* 2008; Wallace and Lemaire 2007; Watt *et al.* 2008) the emotional impact of medical work had generally been neglected within medical sociological literature (Graham 2006), and a key finding of this research is the stressful nature of sedation provision and the necessity for preventing emotional contagion. This thesis gives empirical evidence of clinicians' felt stress due to treating anxious patients, which embellishes previous quantitative studies of dentists' stressors. The prevention of emotions from transferring between SCDPs and patients has been explored within nursing but has not been identified as part of dental work. This study highlights its integral role within SCSCs, and the invisibility of such work which is either unseen or unrecognised by others as labour. Whilst only one PCDP expressed a gendered analysis of this work, their description of SCDPs as female contrasted with equal numbers of male and female DSTG members, highlighting the disparity between Strauss *et al.*'s (1985 [1997]) assertion that sentimental work is gender neutral and Nettleton's (2006b) assertion that emotional work is '*women's work*' (p. 160). Within SCSCs the emotional labour *is* gender neutral, but is perceived as female. The management of emotions places a demand upon providers which puts them at risk of burnout, and can therefore affect both their clinical provision and personal health status. This study therefore highlights an important theoretical health risk to SCDPs.

This thesis highlights some of 'back-stage' work undertaken by SCDPs, which augments the front-stage performance for the visiting patients, in order to successfully host, some of which crosses the boundary between back and front-stage. SCDPs are required to be flexible in their interpersonal and procedural approaches, in order to make sedation the 'right tool for the job'. This flexibility of approach contributes to patients' perceptions of SCDPs as patient-centred, but is actually a form of articulation work undertaken in order to accomplish treatment. In addition, the physical and professional risk management strategy of carrying out physical checks on patients' safety also contributes to SCDPs' presentation as caring individuals. The reassuring impact of this work contrasts with similar actions performed by midwives which introduce fear through their constant surveillance (Scamell 2011).

9.4.3 Influencing Inhabitants

The parlour was a site of influence on visitors, both through the meeting between them and their hosts and the environment itself. The experience of spending time within the parlour was hoped to have a formative effect on its inhabitants (Flanders 2004), and the props of the setting- the books, pictures and tapestries it contained, as well as the furniture's refined and polished finish, were carefully chosen in order to affect those who came within their influence.

This study highlighted SCDPs' intentions to have a long-term influence upon patients, through their exposure to dentistry within the SCSC setting, so that they are subsequently able to receive dental care within primary care. Dental sedation research has focussed predominantly upon the use of different modalities (see for example Hosey *et al.* 2004; Leitch *et al.* 2004; Ransford *et al.* 2010; Ustun *et al.* 2006 amongst many others), and there is a dearth of evidence regarding patients'

experiences of sedation and the outcome of treatment (Adair *et al.* 2003). This research contributes to addressing this gap, and demonstrates the potential of SCSCs to affect patients' interactions with dentistry in a variety of ways. Whilst overtly providing a clinical service and meeting GDC curricular requirements, the SCSC environment is intended by SCDPs to augment their interpersonal performance and have a potentially formative effect upon both the patient visitors and the treating students. These roles reflect the domestic parlour's tension between acceptance and development (Grier 1988).

Liminal places are associated with liminal states of being which enable a re-evaluation of previously assumed perspectives. Like domestic parlours' social visits and rites-of-passage, SCSCs' clinical visits have the potential to be transformative for those passing through them. The whole experience of engaging with dentistry within the SCSC environment through the medium of sedation is intended to have impressed upon patients and students experiential '*gnosis*' (Turner 1967, p. 102) of dental treatment, fundamentally changing them and their outlook on dentistry for the future. Through visiting SCSCs, patients can find a way of stopping their vicious circle of avoidance (Armfield *et al.* 2007; Berggren 1993). By removing an overwhelming oral health 'debt', demonstrating the acceptability of treatment within dental settings, and '*conveying [positive] information...through scenic means*' (Goffman 1959 [1990], p. 100) about their safety from '*existential threat*' (Abrahamsson *et al.* 2002a, p. 190) SCSCs consequently change patients' previous assumptions and avoidant orientations. For some patients the act of physically and mentally stepping out of their social milieu gives them an opportunity to examine dentistry in a new light. This study demonstrated the potential of sedation treatment to facilitate the development of trust between patients and dental settings, and highlights the potential of SCSCs to provide reparative relationships which address previous experiences.

Although parlour owners *intended* time within such environments to influence their visitors, the *outcome* of visits could not be guaranteed and this thesis confirmed this limited potential for SCSCs to affect their visitors. It verified recent analyses of boundary objects, which highlights their inhibitory as well as facilitative nature depending on the compatibility of differing worlds' interpretations of technologies' embodied information. The intent to influence patients so that they subsequently engage with dentistry contrasted with the agenda of some patients. Sedation translates the avoidance of these anxious patients' from total evasion to psychological avoidance, in a similar manner to DGA, by placing them in a sedated 'tunnel' of liminal experience. As such, SCSCs' potential impact is curtailed by their visitors' wishes to be influenced and the side effects of treatment. The study illustrates Turner's (1977, 1982) assertion that such 'limbo' events can be unchanging experiences. Instead of a *volte-face*, a partial conversion from complete avoidance to limited and specific engagement was more commonly reported. A '*weak intersection*' (Tovey and Adams 2001, p. 703) between SCDPs and patients occurred, where patients appropriated SCSCs' technology for their own ends. Like participants in the study by Averley *et al.*(2008), most patients' exposure to dentistry via sedation reduced anxiety about subsequent treatment with sedation rather than dental treatment *per se*. Patients *are* changed by their exposure to the clinic but develop a perma-liminal status which seeks to stay within SCSCs for treatment, unable to either completely avoid or fully engage with dentistry. Whilst patients can develop a new perspective on dentistry through the treatment process, they can also engage temporarily but leave the process essentially the same as before, their visits becoming liminoid events which are experienced but which do not lead to 'ontological' change. The research confirms Kent's (1986) assertion that for experiences to affect subsequent expectations they must not only be different but also typical of future potential occasions. By having a different physical structure

and available treatment to 'typical' dentists¹³⁸, SCSCs are handicapped in their potential to affect this change.

One significant finding of this study is that the influence exerted within SCSCs is not one-way. Whilst SCDPs seek to affect attending patients, as discussed earlier the emotional work required to present sedation favourably comes at a potential cost. Treatment of anxious patients is stressful for clinicians, and the emotional labour required to prevent emotional contagion places them at risk of emotional burnout. However this articulation work is unseen and therefore unacknowledged as anything other than soft skills or (gendered) personal attributes.

9.5 Reflections on the Research Process

This research analysed the 'situation' of secondary care sedation provision by interviewing a variety of participants, a method also employed in the only other reported qualitative exploration of sedation which relied upon participants' accounts provided in focus groups (Averley *et al.* 2008). Such an approach provides participants with an opportunity to voice their own experience and understandings, whilst allowing researchers to explore phenomena not possible to observe (Bryman 2008). Although interviews are opportunities to provide accounts (Coffey and Atkinson 1996; Hammersley and Atkinson 2007; Silverman 2010) as deliberate 'speech acts' (Austin 1976), for the purposes of this analysis my status as a participant-investigator ensured that I had sufficient 'contributory expertise' (Collins and Evans 2002, 2007) to identify elements of accounting and rhetoric that failed to match actual practice. This ensured that I could address any potential disparities between action and accounted action both at the time of the interview as well as during subsequent analysis.

¹³⁸ PCDPs

As I discussed earlier (see Chapter 3 pp. 76-77), my expertise could have been used as an analytic window if I had chosen autoethnography as the research method, but this approach would have had several drawbacks. In addition to Delamont's (2007, 2009) critiques, Morse (2009) has suggested that such an approach '*makes voyeurs of us all*' (p.1655), and recommends that principal investigators should '*leave [their lives] at home*' (p.1655). Although she argues that personal experience may provide insight and should be used as part of the reflexive process, she also reflects the outsider-insider dichotomy of traditional ethnographic research which posits that a culture can only *truly* be seen by an outsider. In reality there are likely to be difficulties from both sides of the divide (Atkinson *et al.* 2003): outsiders may struggle to make the new familiar, and insiders struggle to make the familiar new. If it is possible to cross the looking glass, it should be possible in both directions and by engrossing myself in social science analyses I feel confident that I have been able to develop analytic perspectives which render my familiar environment understandable in a new way.

My dual status as a dentist and novice social scientist has not been without problems. Dentistry is a predominantly quantitative research field (Colquitt 2011), and my initial orientation towards qualitative research and explorations of social science literature took up an inordinate amount of the early research period. By exploring sedation as a social scientist I found myself at the intersection between the social worlds of Dentistry and (primarily) Sociology. This has required me to carefully balance my academic allegiance whilst feeling the tension pulling me between each world¹³⁹. Losing this balance could have (and may have!) planted me into either one side or the other, resulting in research output which is not useful to

¹³⁹ For example, do I collude with boundary work by dental colleagues who represent such academic fields as soft, woolly, tree hugging and irrelevant to practical dentistry?

either academic community (Gibson 2000). Lingard (2007) notes in her discussion of medical education that the novice learner is ‘a *boundary object in their own right*’ (p. 129) as they hold a peripheral apprentice status whilst negotiating their identities when moving between different fields. Instead of partiality I have sought to hold a translating position (Ribeiro 2007a, b), buffering the two social worlds and helping them to meet. The tension of training in social science research as a qualified dentist also created a degree of role conflict whilst conducting the research, as I was asked to give opinions or had the guilty knowledge and ethical dilemmas of my obscured dental role (Bloor *et al.* 2007, 2010). This was not easily or satisfactorily resolved throughout the entire data gathering process.

Despite the challenges that a dual role brought to my research, the experience of examining dental care through another paradigm has been both interesting and illuminating. Ross (1965) argues that social science can enrich dental care, and that assertion has certainly proven true in my own practise. As well as informing my analysis of the data, the wider reading which this project necessitated has influenced both my clinical treatment and teaching. It has provided me with concepts that explain phenomena I previously recognised but did not know how to describe: the states of transition and liminality, the disquiet felt due to unclassifiable and ‘dirty’ boundary crossing or uncontainable risk, the importance of interpretation rather than ‘reality’¹⁴⁰ and the drive and process of professional boundary work. Such concepts (in an appropriate form) have now found their way into the information I give to the patients and students that I treat and teach in my various professional roles. They have given me additional maps by which to organise my world so that rather than ‘*choose one [world view] in advance as infallible [I can]*

¹⁴⁰ The run on Northern Rock or petrol queues due to feared shortages which have taken place during the period of this research both demonstrate that ‘*if [people] define situations as real, they are real in their consequences*’ (Thomas and Thomas 1928 pp. 571-572).

bear them all in mind, looking out for whatever may be useful in all of them' (Midgley 2004, p 27).

9.5.1 Implications for Clinical Care

Sedation provision within SCSCs affects patients and both referring and treating clinicians. Three main areas of recommendations which address and attempt to ameliorate these effects may facilitate the quality and ease of patients' access to clinical care:

- 1. A dual strategy is required which increases the ring-fenced budgets of Primary Care Organisations to provide sedation by redirecting funding from secondary care DGA and sedation provision, as well as providing an educational programme targeted to PCDPs' main interests and needs which highlights the pragmatic ease of sedation provision and its benefits to both business and treatment provision.**

Chapters 6 and 8 illustrated that clinical service provision within SCSCs loads sedation with additional contextual meanings regarding its speciality and importance. To 'normalise' it and prevent dependence upon a secondary care setting, it needs to be easily available within primary care settings. Secondary care provision is more expensive than primary care, but current primary care provision of sedation is inconsistent, partly due to the decentralised nature of negotiations between potential providers and different primary care organisations (PCOs). As a consequence of heterogenous NHS contract values, PCDPs are faced with a population of anxious patients which they have neither the time nor the remuneration to treat (Hill *et al.* 2008).

As shown in Chapter 7, in addition to financial barriers, the high regulation and robust training structure of sedation which preserves its availability to dentistry also puts PCDPs off training, despite Universities and special-interest groups such as SAAD running training courses and the publication of advice on the commissioning of dentists with special interests (DWSIs) in sedation within primary care (DoH 2007). Provision of sedation within primary care settings could ease access to care for patients, as well as prevent the perception of sedation as a 'special' hospital-based intervention. However this requires creating incentives for PCDPs to provide sedation. In order to encourage uptake, the benefits of provision need to be accentuated whilst the barriers are minimised. Investment in primary care sedation would reduce the long-term costs of more expensive or extensive dental care within secondary care settings.

The commissioning of primary care sedation services needs to be carefully planned so that competent providers are contracted and the moral hazard of engaging inappropriate providers is minimised. Chapter Five demonstrated that sedation is not just a neutral technology but that the accomplished performance of emotional labour is critical to successful provision. Whilst sedation does not require specialised secondary sedation settings it does require interpersonal skills which might not be available from all PCDPs, and it needs to be supported by a system which encourages a holistic and patient-centred approach to patient care.

- 2. Clear information needs to be provided by both SCSCs and referring PCDPs to ensure that all parties understand the nature of SCSCs' service provision.**

Chapters 4 and 8 demonstrated that patients attend with unclear understandings of the sedation treatment process and their exact relationship with the providing

SCSCs. Whilst this may be due to their own need to classify sedation as a DGA analogue regardless of the information provided to them by their referring clinician, it may also be due to the quality of information provided by PCDPs. In order to minimise conflicting messages of temporary referral for conscious treatment and permanent referral for (un)conscious treatment, there is a need for SCSCs to provide clear referral criteria which set out minimum information provision requirements so that patients are appropriately referred. Reflecting recommendations by (Averley *et al.* 2008), better information needs to be given by referring PCDPs to ensure patients understand the purpose of their referral, and an information leaflet should be sent by SCSCs with the initial appointment letter which clearly sets out the conditions of SCSC sedation treatment, rather than verbal or written information being given to patients at the time of their appointment when their anxiety may prevent them from retaining such information. At each appointment for sedation treatment, treating clinicians should consistently reiterate that patients will be discharged upon completion of the Treatment Plan to prevent any information provided at the start of attendance from being forgotten by the time of the last appointment. Whilst clinicians may have an objective of rehabilitation for patients, to impose such an aim is paternalistic rather than patient-centred. By facilitating sedation provision within primary care, patients' wishes to engage with dentistry using sedation will be possible without overloading the service capacity of SCSCs and will provide the '*safety net*' [SCDP2, p. 212] that enables a generous constraint.

- 3. The emotional demands of providing sedation should be afforded more recognition, and training given to sedation providers to equip them with the psychological insight and skills required to protect themselves from burnout. Whilst obligatory debriefs may be impractical, peer and clinical-lead support structures should be**

identified so that staff may benefit from having a sanctioned space within which they can reflect upon their practice in a supportive and empathic environment.

This study has demonstrated the emotional impact of dental work previously neglected sociologically. It has shown the significance that sedation provision has for providers and that a fundamental part of sedation provision is ‘unseen’ and undervalued emotional labour, especially the prevention of emotional contagion from anxious and stressed patients (see Chapter Five). Such work is a risk factor in the development of staff burnout, which could affect both patient care and staff wellbeing. To address this, lessons can be applied from other professions which also provide reparative relationships. Self-care and respect is an important part of the ethical principles of the counselling and psychotherapy profession, and the British Association for Counselling and Psychotherapy’s Ethical Framework asserts that *‘[t]here is an ethical responsibility to use supervision for appropriate personal and professional support and development’* (BACP 2010). Clinical supervision is also an important facet of nursing practice, and aims to increase self-awareness and provide support for nurses thereby facilitating their provision of clinical care (Bush 2005). As studies of burnout in dentists imply that social support is protective against developing burnout (Croucher *et al.* 1998; Osborne and Croucher 1994), the development of similar support structures would enable the insights gained through this study to be directly applied to clinical practise.

9.5.2 Suggestions for Further Research

This thesis highlights several potential avenues for further research to develop the issues it identified. Firstly, the dearth of research into patients’ experiences of sedation treatment that this thesis partially attempts to address requires further

attention. The development of treatment techniques such as intranasal midazolam (Ransford *et al.* 2010), propofol (Hosey *et al.* 2004; Leitch *et al.* 2004) and dexmedetomidine (Ustun *et al.* 2006) suggest interesting new approaches to managing anxiety. However the lack of attention to patients' accounted experiences, or evidence of long-term efficacy in reducing anxiety, suggest that researchers have generally followed a more biological rather than biopsychosocial path which

'leads many enquirers to propose biochemical solutions to today's social and psychological problems...rather than asking what made them unhappy in the first place' (Midgley 2004, p. 2).

By undertaking concurrent qualitative research into patients' experiences and beliefs regarding treatment, the effect of these interventions on their wellbeing, life and lifestyle can be explored and understood (Miller and Crabtree 2005) and guidelines developed for their use (NCGC 2011). This thesis identified three potential trajectories following sedation which I discussed in Chapter Eight- stopping, breaking and creating vicious cycles. Further research is required to develop an understanding of patient trajectories and the reasons for their development. The impact of SCSCs' atypical nature upon patients' subsequent experience also requires further exploration, and contrasting research into the impact of sedation in primary care and secondary care settings might prove beneficial in understanding the realistic aims of each setting.

Secondly, this research draws attention to two previously identified lacunae in social science research- a sociology of oral health and healthcare (Exley 2009) and a compassionate perspective on the emotional impact for staff of undertaking biomedical work (Graham 2006). Further research into the processes and outcomes of dental treatment would address such concerns. A significant finding of this study was the importance of emotional work in secondary care sedation provision. This thesis has identified a previously neglected emotional demand which is placed on

sedation providers through treating dental patients (see Chapter Five). As such situations place clinicians at a risk of developing emotional burnout, further research could be conducted specifically into the impact of treatment for SCDPs to explore whether this risk is a real or theoretical possibility. Sociological constructions of clinicians as a powerful elite render their humanity invisible, and exploration of sedation's emotional impact on clinicians will contribute both to dental knowledge as well as social science.

Thirdly, this chapter has provided a novel approach to analysing biomedical encounters. It has suggested the Parlour as a theoretical tool to examine such interactions, and identified hosting as an additional form of frontier management. Such social structures may exist where boundary organisations advocate one of their inherent worlds; temporarily accommodate visitors; provide a location of engagement and 'parley'; are performative sites; and have the intention of influencing those within them. It is possible that analogous clinical settings also undertake this function, and two potential areas for the application of this metaphor to identify both its veracity and transferability are needle-exchange / drug treatment programmes and Genito-Urinary Medicine (GUM) outpatients clinics. Both clinical settings have transient populations seeking short-term services (i.e. drug services or treatment of sexually transmitted diseases (STDs) respectively). A felt threat might exist due to either patients' fear of the medical environment or the potential stigma and vulnerability felt by the social status of illicit drug use (Ahern *et al.* 2007; Henderson *et al.* 2008; Semple *et al.* 2005) or having an STD (Cunningham *et al.* 2002; Duncan *et al.* 2001; Fortenberry *et al.* 2002; Holgate and Longman 1998; Mulholland and van Wersch 2007). The management of such patients, including the overt demonstration of empathy and care, would require the performance of clinicians' roles and the management of the emotional impact of such encounters. It might be anticipated that whilst providing short-term treatment within drug or GUM

clinics clinicians also have a long-term agenda of changing patients' future drug or sexual behaviours in order to prevent the need for re-engagement. Research of these settings may help in developing the evidence base for this analytic model.

Finally, an incidental finding of this study discussed in Chapter Seven was the perceived barrier to primary care provision that sedation regulation produces. Further research into the current pattern of NHS and privately indemnified primary care sedation and PCDPs' perceived barriers to provision are essential if sedation is to facilitate the access to treatment of currently avoidant patients by becoming a common tool in pain and anxiety management.

9.6 Conclusion

This thesis explored the process of sedation provision within SCSCs. It highlights the social and accommodating nature of secondary care sedation provision and demonstrates the variety of consequences which stem from this hosting role. The status that SCSCs have as temporarily visited locations at the hinterland to general dentistry is reminiscent of liminal spaces where different worlds interact. Unlike porches (Beckham 2004; Postles 2007) visitors to SCSCs are physically enveloped within dentistry's territory, whilst in contrast to hotels or beaches (Azaryahou 2005; Preston-Whyte 2004; Shields 1991) they are not attending for ludic enjoyment. The ambivalence and threat that anxious patients feel towards dentistry (Abrahamsson *et al.* 2002a; Abrahamsson *et al.* 2002b) constructs such spaces as similar to no-man's land (Trubshaw 1995 [2008]).

The provision of sedation within liminal clinics is a social practise which involves the alignment of tasks in order for them to be successfully undertaken. Like domestic parlours, SCSCs provide a space within which different social worlds can

temporarily, but purposively interact. Their role is to influence the visitors' perception of their host and also at a more fundamental level to affect their subsequent behaviour. Whilst domestic parlours expressed messages intended to influence personal morality¹⁴¹, exposure to the environment of the clinical Parlour seeks to influence the visitors' ability to act in accordance with the clinics' ideology. For SCSCs this involves the development of trust in dental settings, developed through the front-stage and back-stage work undertaken by the hosting clinicians.

By adopting a sociological and anthropological gaze this study has been able to explore the lived experiences of participants who have interacted with each other via mediating SCSCs. By doing so, the everyday practises of sedation provision and their consequences have been open to a deeper understanding which places them in a wider social context. Such application demonstrates the veracity of Ross' (1965) assertion that social science can enrich dentistry. This thesis proposes the Parlour as a new structure for analysing these clinical frontier settings, which combine performative aspects within a receptive environment in order to influence the attending 'other'. It extends the identified forms of frontier work by demonstrating the hosting role that social worlds can play. By framing SCSCs as Parlours the everyday social nature of biomedical clinics' work is perceivable: by treating anxious patients, SCSCs are performing the everyday-task of hosting visitors.

The provision of sedation within dentistry's Parlour offers anxious individuals the opportunity to engage in a way which will address their perceived threat. This has the potential for such experiences to lead to them engaging in an ongoing attendance within primary care settings. However, as this study has shown that whilst such an ideal may be achieved for some patients, for others their experience of SCSCs has provided further reasons to avoid PCDPs. Whilst the motivations at

¹⁴¹ Such as hand embroidered tapestries of the ten commandments.

work with the clinical Parlour differ from those of the spider in Mary Howitt's (1829 [2002]) poem¹⁴², as this thesis demonstrates the processes and outcomes may not. Levitt *et al.* (1999) raise a concern that sedation use

'places a patient in a vicious circle of drug dependency for regular dental care
(pp.487-488).

This study has demonstrated that not only the drugs but the whole techno-social package of secondary care sedation provision can create such vicious circles. Whilst SCSCs ameliorate the existential threat that previously avoidant patients feel about dentistry, once they do attend the Parlour


'who goes up [their] winding stair [may] ne'er come down again'

(Howitt 1829 [2002]).

¹⁴² Though felt to be malevolent the intentions are benign.

Chapter 10 - Appendices

10.1 Appendix 1 - Ethical Approval



Canolfan Gwasanaethau Busnes
Business Services Centre

South East Wales Research Ethics Committee - Panel D

Telephone: 02920 376822/6823
Facsimile: 02920 376835

11 February 2008

Mr Stephen Woolley
Clinical Research fellow
Cardiff University
Adult Dental Health dept.
Cardiff Dental School, Cardiff University
Cardiff
CF14 4XY

Dear Mr Woolley

Full title of study: A Qualitative Study of Stakeholders' Attitudes towards the Provision of Conscious Sedation in a Secondary Care Clinic

REC reference number: 08/WSE04/6

Thank you for your letter of 01 February 2008, responding to the Committee's request for further information on the above research and submitting revised documentation.

The further information has been considered on behalf of the Committee by the Chair, Dr DEB Powell.

Confirmation of ethical opinion


On behalf of the Committee, I am pleased to confirm a favourable ethical opinion for the above research on the basis described in the application form, protocol and supporting documentation as revised.

Ethical review of research sites

The Committee has designated this study as exempt from site-specific assessment (SSA). There is no requirement for [other] Local Research Ethics Committees to be informed or for site-specific assessment to be carried out at each site.

Conditions of approval

The favourable opinion is given provided that you comply with the conditions set out in the attached document. You are advised to study the conditions carefully.

 NHS
Wales
CIG
CYMRU

Canolfan Gwasanaethau Busnes
Ty Churchill
17 Ffordd Churchill
Caerdydd, CF10 2TW
Ffôn: 029 20 376820 WHTN: 1809
Ffacs: 029 20 376828

Business Services Centre
Churchill House
17 Churchill Way
Cardiff, CF10 2TW
Telephone: 029 20 376820 WHTN: 1809
Fax: 029 20 376828

rhan o Addyegu Bwrdd Iechyd Lleol Powys / part of Powys Teaching Local Health Board

Approved documents

The final list of documents reviewed and approved by the Committee is as follows:

Document	Version	Date
Application		23 November 2007
Investigator CV	Mr SM Woolley	23 November 2007
Investigator CV	B Chadwick	20 November 2007
Protocol	1	23 November 2007
Covering Letter		23 November 2007
Letter from Sponsor	Cardiff and Vale NHS Trust	02 November 2007
Peer Review	Cardiff University	01 August 2007
Compensation Arrangements	UMAL	01 August 2007
Letter of invitation to participant	Patient - Appendix A	23 November 2007
Letter of invitation to participant	Referral - Appendix B	23 November 2007
Participant Information Sheet: Sedation Staff Information Form	1 - Appendix E	23 November 2007
Participant Information Sheet: Referrer Information Form	1 - Appendix D	23 November 2007
Participant Information Sheet: Patient Information Form	1.3	01 February 2008
Participant Consent Form: Sedation Staff	1 - Appendix H	23 November 2007
Participant Consent Form: Referrer	1 - Appendix G	23 November 2007
Participant Consent Form: Patient	1 - Appendix F	23 November 2007
Response to Request for Further Information	S M Woolley	01 February 2008
Interview Guide	Referrers	23 November 2007
Interview Guide	Staff	23 November 2007
Interview Guide	Patients	23 November 2007

R&D approval

All researchers and research collaborators who will be participating in the research at NHS sites should apply for R&D approval from the relevant care organisation, if they have not yet done so. R&D approval is required, whether or not the study is exempt from SSA. You should advise researchers and local collaborators accordingly.

Guidance on applying for R&D approval is available from <http://www.rdforum.nhs.uk/rdform.htm>

Statement of compliance

The Committee is constituted in accordance with the Governance Arrangements for Research Ethics Committees (July 2001) and complies fully with the Standard Operating Procedures for Research Ethics Committees in the UK.

After ethical review

Now that you have completed the application process please visit the National Research Ethics Website > After Review

Here you will find links to the following

- a) Providing feedback. You are invited to give your view of the service that you have received from the National Research Ethics Service on the application procedure. If you wish to make your views known please use the feedback form available on the website.
- b) Progress Reports. Please refer to the attached Standard conditions of approval by Research Ethics Committees.
- c) Safety Reports. Please refer to the attached Standard conditions of approval by Research Ethics Committees.
- d) Amendments. Please refer to the attached Standard conditions of approval by Research Ethics Committees.
- e) End of Study/Project. Please refer to the attached Standard conditions of approval by Research Ethics Committees.

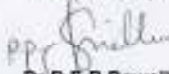
We would also like to inform you that we consult regularly with stakeholders to improve our service. If you would like to join our Reference Group please email referencegroup@nationalres.org.uk.

08/WSE04/6

Please quote this number on all correspondence

With the Committee's best wishes for the success of this project

Yours sincerely



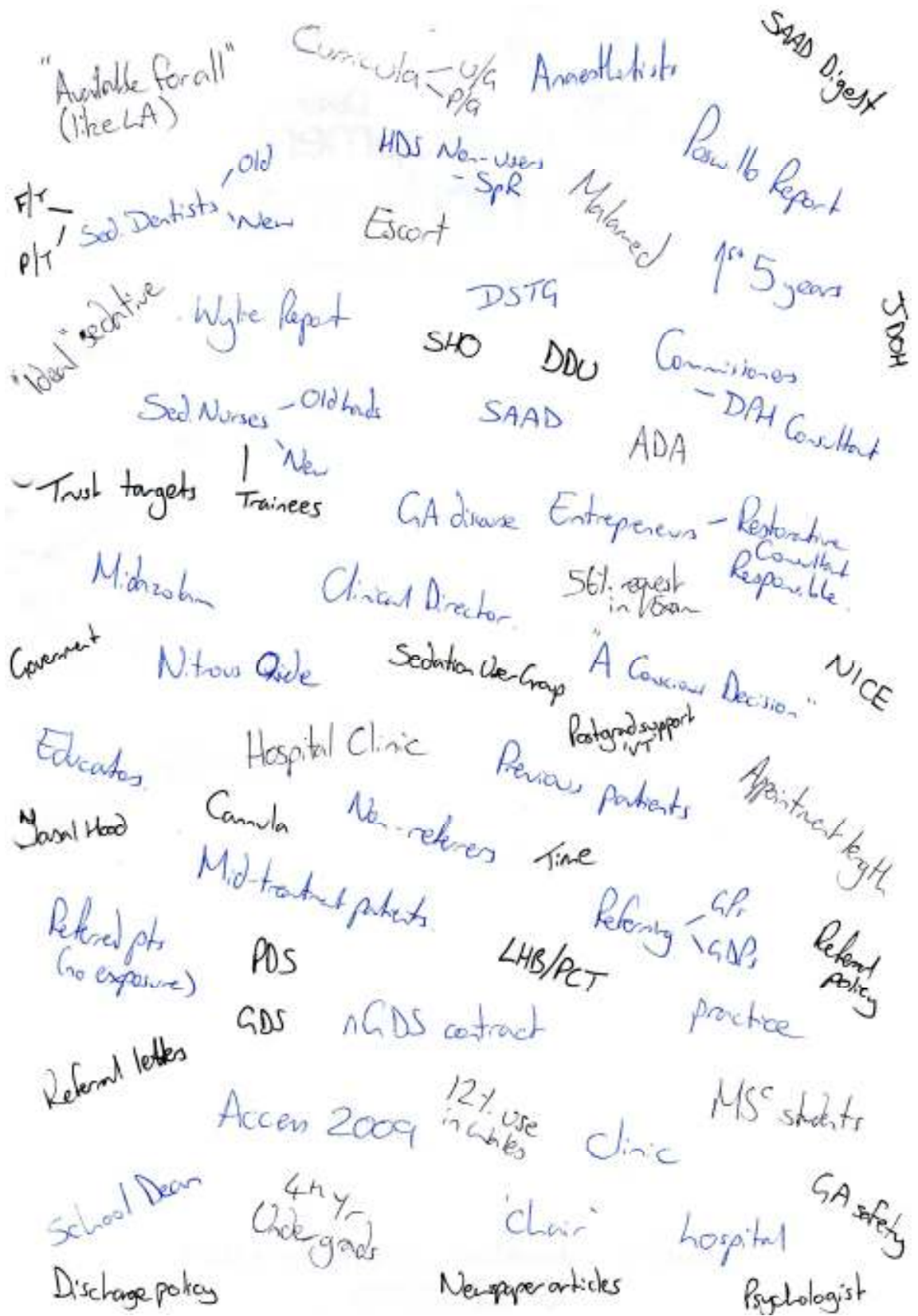
Dr D E B Powell
Chair

Email: jagjit.sidhu@bsc.wales.nhs.uk

Enclosures: Standard approval conditions - SL-AC2

Copy to: R&D Department for Cardiff University
R&D Department for Cardiff & Vale NHS Trust

10.2 Appendix 2 - Early SCSC Situational Map



10.3 Appendix 3 - Participant Invitation Letter

Dear XXXX,

I am writing to inform you about a research project which is being undertaken within the Sedation Suite which you may be interested in. The project is called:

A Qualitative Study of Stakeholders' Attitudes towards the Provision of Conscious Sedation in a Secondary Care Clinic.

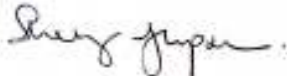
This project seeks to understand what people think about dental hospital-based Sedation Clinics. You have been chosen to be asked to express your views, because you have been referred for treatment or received treatment in the past. This project will form part of a PhD research degree at Cardiff University for Mr Stephen Woolley.

He is interested in gaining your views and expectations about this clinic, and would appreciate if you would read the enclosed information leaflet. If there are any further questions you may have, please don't hesitate to contact him on the number provided on the enclosed information form.

If you are interested in participating, please return the slip overleaf to:

Mr. S. Woolley
ACR&PH
Cardiff University School of Dentistry
FREEPOST SWC1464
Cardiff
CF14 4XY

Yours Sincerely,



Dr S.A. Thompson
Senior Lecturer in Conscious Sedation and Special Care Dentistry

Response Slip: XXXXX

Please tick as appropriate:

I am interested in taking part in this project, and am happy to be interviewed .

I wish to be interviewed at Cardiff Dental .

I wish to be interviewed at my home .

I wish to be interviewed at elsewhere .

Phone number to arrange an interview: _____

To be returned to:

Mr. S. Woolley
ACR&PH
Cardiff University School of Dentistry
FREEPOST SWC1464
Cardiff
CF14 4XY

10.4 Appendix 4 - Information Sheets for Participants

10.4.1 Patient Information Form

A Qualitative Study of Stakeholders' Attitudes towards the Provision of Conscious Sedation in a Secondary Care Clinic

Dear patient

You are being invited to take part in a study we are doing in the dental hospital. We are looking at what patients think and feel about the Sedation Clinic. This will involve taking part in a private and informal conversation.

Before you decide, it is important for you to understand why the research is being done, and what it will involve. Please take time to read the information carefully and discuss it with others if you wish. Please ask if there is anything you do not understand, or if you would like more information.

We would then be grateful if you would take the time to decide whether you wish to take part in this study.

What is the purpose of the study?

We want to know what patients who have been referred to the Sedation Clinic think and feel about it. We want to understand how patients perceive the clinic's role.

Why have I been chosen?

You have been chosen because you have been referred for, or have received, routine dental treatment at the clinic.

Who is organising the study?

The study is organised by the Applied Clinical Research and Public Health research group of Cardiff University as part of a research project.

Do I have to take part?

It is up to you to decide whether or not to take part. If you do decide to take part you will be asked to sign a consent form. If you decide to take part you are still free to withdraw at any time and without giving a reason.

What will happen if I agree to take part?

You will be asked to take part in an informal conversation with a researcher about your thoughts and feelings about the clinic. This conversation will last approximately 1 hour and will be confidential.

What are the possible risks of taking part?

We are not aware of any risks.

What are the possible benefits of taking part?

You will not gain any immediate benefit from taking part. We hope that the information we get from this study will help us to understand what patients want and expect from the Sedation Clinic. From this understanding we may be able to develop ways of helping anxious patients deal with their fear in the future. There is

no financial benefit from taking part in this study, but parking costs incurred in addition to your appointment will be reimbursed.

Who has reviewed the study?

The study has been reviewed by Cardiff University, the ethics committee of South East Wales, and the Research and Development committee of Cardiff and Vale NHS Trust.

What about confidentiality?

The interview will be undertaken in private, and all the information provided will be kept confidential by the researcher. Prior to publication, any information used will be made anonymous so that participants will not be identifiable. Following publication, all data will be destroyed.

What will happen to the results of the study?

The results will be made anonymous, and will form part of a PhD thesis. They will also be published in reputable scientific journals. You will not be identified in the publications. You will be able to contact the researcher if you wish to know the results of the study.

Who do I contact for further information?

*You may contact **Mr. Stephen Woolley** for any further information you may require about this study by telephoning **(029) 2074 4258***

Thank you for taking the time to read this information sheet

10.4.2 Referrer Information Form

A Qualitative Study of Stakeholders' Attitudes towards the Provision of Conscious Sedation in a Secondary Care Clinic

Dear colleague

You are being invited to take part in a study we are doing in the dental hospital. We are looking at what patients think and feel about the Sedation Clinic. This will involve taking part in a private and informal conversation.

Before you decide, it is important for you to understand why the research is being done, and what it will involve. Please take time to read the information carefully and discuss it with others if you wish. Please ask if there is anything you do not understand, or if you would like more information.

We would then be grateful if you would take the time to decide whether you wish to take part in this study.

What is the purpose of the study?

In this study, we are looking at what clinicians who have referred patients to the Sedation Clinic think and feel about it. We want to understand how you perceive the clinic's role, and what you expect.

Why have I been chosen?

You have been chosen because you have referred a patient for routine dental treatment at the clinic.

Who is organising the study?

The study is organised by the Applied Clinical Research and Public Health research group of Cardiff University as part of a research project.

Do I have to take part?

It is up to you to decide whether or not to take part. If you do decide to take part you will be asked to sign a consent form. If you decide to take part you are still free to withdraw at any time and without giving a reason.

What will happen if I agree to take part?

You will be asked to take part in an informal conversation with a researcher about your thoughts and feelings about the clinic. This conversation will last approximately 1 hour and will be confidential.

What are the possible risks of taking part?

We are not aware of any risks.

What are the possible benefits of taking part?

You will not gain any direct benefit from taking part, but we hope that the information we get from this study will help us to better understand what clinicians want and expect from the Sedation Clinic. From this understanding we may be able to develop effective ways of helping anxious patients deal with their fear in the future, and to clarify communication for you.

Who has reviewed the study?

The study has been reviewed by Cardiff University, the ethics committee of South East Wales, and the Research and Development committee of Cardiff and Vale NHS Trust.

What about confidentiality?

The interview will be undertaken in private, and all the information provided will be kept confidential by the researcher. Prior to publication, any information used will be made anonymous so that participants will not be identifiable. Following publication, all data will be destroyed.

What will happen to the results of the study?

The results will be made anonymous, and will form part of a PhD thesis. They will also be published in reputable scientific journals. You will not be identified in the publications. You will be able to contact the researcher if you wish to know the results of the study.

Who do I contact for further information?

*You may contact **Mr. Stephen Woolley** for any further information you may require about this study by telephoning **(029) 2074 4258***

Thank you for taking the time to read this information sheet

10.4.3 Sedation Staff Information Form

A Qualitative Study of Stakeholders' Attitudes towards the Provision of Conscious Sedation in a Secondary Care Clinic

Dear colleague

You are being invited to take part in a study we are doing in the dental hospital. We are looking at what patients think and feel about the Sedation Clinic. This will involve taking part in a private and informal conversation.

Before you decide, it is important for you to understand why the research is being done, and what it will involve. Please take time to read the information carefully and discuss it with others if you wish. Please ask if there is anything you do not understand, or if you would like more information.

We would then be grateful if you would take the time to decide whether you wish to take part in this study.

What is the purpose of the study?

In this study, we are looking at what staff who work in Sedation Clinics think and feel about it. We want to understand how you perceive the clinic's role, and what you expect.

Why have I been chosen?

You have been chosen because you work within a sedation clinic.

Who is organising the study?

The study is organised by the Applied Clinical Research and Public Health research group of Cardiff University as part of a research project.

Do I have to take part?

It is up to you to decide whether or not to take part. If you do decide to take part you will be asked to sign a consent form. If you decide to take part you are still free to withdraw at any time and without giving a reason.

What will happen if I agree to take part?

You will be asked to take part in an informal conversation with a researcher about your thoughts and feelings about the clinic. This conversation will last approximately 1 hour and will be confidential.

What are the possible risks of taking part?

We are not aware of any risks.

What are the possible benefits of taking part?

You will not gain any direct benefit from taking part, but we hope that the information we get from this study will help us to better understand what clinicians want and expect from the Sedation Clinic. From this understanding we may be able to develop effective ways of helping anxious patients deal with their fear in the future, and to clarify communication for you.

Who has reviewed the study?

The study has been reviewed by Cardiff University, the ethics committee of South East Wales, and the Research and Development committee of Cardiff and Vale NHS Trust.

What about confidentiality?

The interview will be undertaken in private, and all the information provided will be kept confidential by the researcher. Prior to publication, any information used will be made anonymous so that participants will not be identifiable. Following publication, all data will be destroyed.

What will happen to the results of the study?

The results will be made anonymous, and will form part of a PhD thesis. They will also be published in reputable scientific journals. You will not be identified in the publications. You will be able to contact the researcher if you wish to know the results of the study.

Who do I contact for further information?

*You may contact **Mr. Stephen Woolley** for any further information you may require about this study by telephoning **(029) 2074 4258***

Thank you for taking the time to read this information sheet

10.5 Appendix 5 - Interview Topic Guides

10.5.1 Interview Guide- Patients

The aims are to understand

- What pts expect from staff treatment
- What pts want to achieve
- How pts see sedation staff
- How pts see responsibility, management and control

Questions are to be used as conversation guides rather than set schedule:

Topic	Follow-up/ Prompts
What kind of people do you think work in sedation? When you think of a sedation clinic, what do you expect? How do you think staff will be?	Why do you think that? Why do you think they work there?
What are you hoping to get out of attending? What does it mean to you to be attending this clinic?	What would be a successful outcome for you? What should happen at the end of treatment?
What is this clinic for?	Does it have any other role?
Why do you think your dentist referred you (rather than treat themselves)?	Why did you agree to be referred?
What responsibility do you think people have?	What responsibility do staff have? What responsibility do you have? What expectations do you feel there are?
Who has power in the clinic?	How do you know that? What would you tell the staff if they asked you how they make it a better clinic? How do you feel about this proverb: 'Trust is good, control is better'?

10.5.2 Interview Guide- Referrers

The aims are to understand

- What referrers expect from the clinic
- Why referrers refer
- How referrers see sedation staff
- How referrers see sedation pts
- How pts see responsibility, management and control

Questions are to be used as conversation guides rather than set schedule:

Topic	Follow-up/ Prompts
What do you think the sedation clinic is like?	What kinds of people work there? What thoughts come to you when you think of this clinic? What is the difference between there and practice How does that affect treatment of patients?
What do you want from the service?	What would be a “successful outcome” for you? What do you hope to achieve What should happen at the end of a TP?
what Patients attitudes are like What do you think are patients’ expectations of the sedation service?	Thinking of patients you’ve had. Can you give me an example? What kinds of patients would you refer to the clinic? When?
Why do people refer patients?	What stops you from treating them yourself?
what pressures/demands are on the service What do you feel are the pressures that affect the clinic?	What demands do you experience as a service provider? Are there any you feel may be similar? Why?
patients control of their sedation career? What would be a ‘successful outcome’ for you?	How do you think decisions should be made about treatment on the clinic?

10.5.3 Interview Guide- Staff

The aims are to

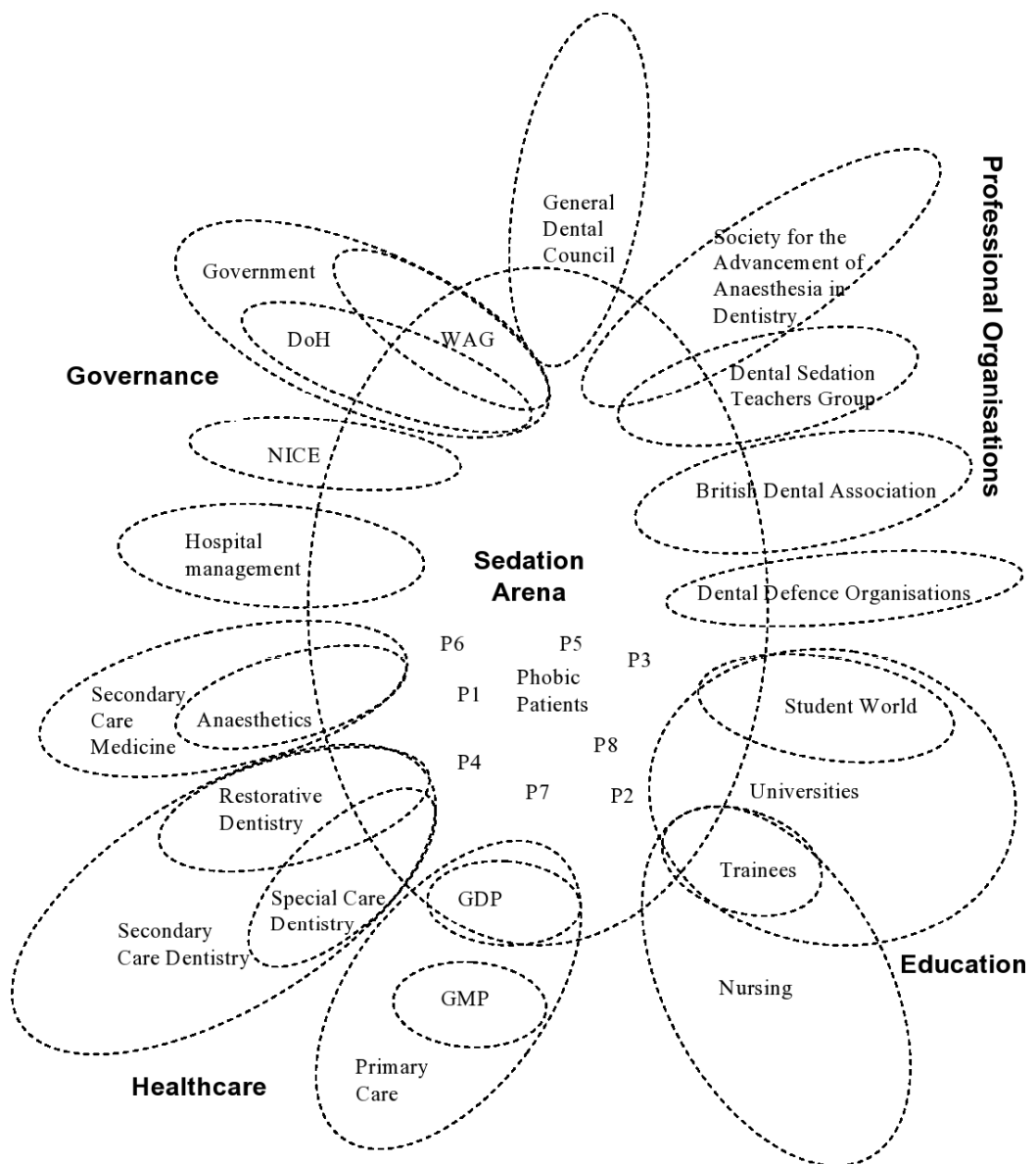
- Understand clinicians' expectations and feelings towards service provision on a secondary-care sedation clinic, and their thinking in relation to referral outcomes.

Questions are to be used as conversation guides rather than set schedule:

Topic	Follow-up/ Prompts
<p>how is it conceptualised</p> <p>How would you describe this clinic to someone else?</p>	<p>What thoughts come to you when you think of this clinic?</p>
<p>what Referrers want from the service</p> <p>What do you think referrers want from the service?</p>	<p>What would be a "successful outcome" for the people who refer in?</p> <p>Why do you think people refer in?</p> <p>Rather than treat patients themselves?</p>
<p>what Patients attitudes are like</p> <p>Can you describe a typical patient for me?</p>	<p>Thinking of patients you've had.</p> <p>Can you give me an example?</p> <p>What do you think are patients' expectations of the sedation service?</p> <p>What would be a "successful outcome" from a patients perspective?</p> <p>What do you think patients want?</p>
<p>what staff think should be the purpose of the service</p> <p>What do you think this clinic should be trying to achieve?</p>	<p>What would be a "successful outcome" for the clinic?</p>
<p>what pressures/demands are on the service</p> <p>What do you feel are the pressures that affect the clinic?</p>	<p>Who do you feel makes demands on you?</p> <p>Are there conflicting demands that you are aware of?</p>
<p>what Staff attitudes are like</p> <p>What are the staff like who work here?</p>	<p>What are the nurses like who work here?</p> <p>What are the dentists like who work here?</p> <p>Can you give me an example?</p>
<p>patients control of their sedation career?</p>	<p>What feedback do you think patients would give to the staff if asked how they could help you?</p>

<p>How much do your views on patients affect your practice?</p>	<p>What feedback do you think patients would give if asked how they could improve the service?</p> <p>What changes do you think patients might suggest?</p> <p>How could you support patients so that their voice is heard?</p> <p>How do you think decisions should be made about treatment on the clinic?</p>
-----------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

10.6 Appendix 6 - SCSC Social World Map



10.7 Appendix 7 - Peer-reviewed Publication and Presentation

British Sociological Association Medical Sociology Group Annual

Conference 2009

Hackers, hippies and boundary objects: A situational analysis of providing sedation for dentistry.

S. Woolley, B. Chadwick, R. Evans and L. Pugsley

The Dental Hospital Sedation Clinic is a medical technology sitting within multiple social worlds: the world of the anxious patient, the world of the referring dental practitioner and the world of staff working within the clinic. Research into sedation has concentrated on the pharmacology and physiological effects of sedative agents, rather than the reasons for engagement, experience of sedation treatment or the outcomes of treatment as defined by those who engage with it.

This paper is based on preliminary findings from a qualitative PhD research project aimed to determine how members from various social worlds conceptualise dental sedation. Semi-structured interviews were undertaken with members from these social worlds and data were analysed using a Situational Analysis method (Clarke,2005). The presentation outlines the way this qualitative method has been used to explore the conceptualisation and experience of the Sedation clinic by different social groups. Using results from initial pilot interviews, emergent themes are identified and discussed in the light of social worlds/arenas theory. The clinic is perceived as a boundary object- something which is “*both plastic enough to adapt to local needs and constraints of the several parties employing [it], yet robust enough to maintain a common identity*” (Star and Griesemer,1989).

An audit of referrals to a secondary care sedation unit

S. M. Woolley¹

IN BRIEF

- A proportion of practitioners refer significantly higher numbers of patients than their peers.
- Referral letters for anxiety management are generally poor.
- Non-pharmacological techniques are seldom requested by practitioners.

RESEARCH

Aims and objectives This audit was carried out to assess referrals received by a clinic treating anxious patients within a dental hospital setting. The audit aimed to provide a baseline measurement prior to the publication of a referral protocol. Referral frequencies were examined to explore the concept of serial referrers. **Methods** A retrospective design was used. The referrals of all patients given assessment appointments for treatment within the Sedation Suite between 1 January and 31 December 2006 were examined. In addition, a random sample of 100 cases was examined for the referral request. **Results** Three hundred and six referrals were sent assessment appointments by the Sedation Suite in 2006. The majority of referrals received (76.1%, $n = 233$) were from practitioners working in the general dental services. On average 1.68 referrals were received per clinician, with a maximum of 18 referrals from one clinician. The majority of patients were female and had an average age of 33.5. One hundred and eighty-seven patients attended for assessment. One hundred and forty-three (46.7%) were treatment planned to receive treatment with pharmacological help. Twenty-two (7.2%) were planned to receive treatment without pharmacological help, though none of the referrals received had considered requesting behavioural management. **Conclusion** This audit confirmed results from previous audits. The standards set for referral were not met. Despite the efficacy of psychological treatments, referring clinicians do not seem to consider their use for anxious patients. Referral patterns seemed to support the idea that a minority of practitioners refer significantly higher numbers of patients than their peers.

BACKGROUND

Dental anxiety is present in a significant proportion of the population. Use of the Modified Dental Anxiety Scale has shown that an average of 9.3% of patients report extreme anxiety,¹ and the United Kingdom Adult Dental Health Survey 1998² showed that 43% of dentate men and 55% of dentate women reported always feeling anxious about going to the dentist. Management of dental anxiety can be achieved by the use of psychological (behavioural

management, cognitive behavioural therapy, hypnosis) or pharmacological (conscious sedation, general anaesthetic) techniques. In 2000, the Department of Health published *A conscious decision*, a report chaired by the Chief Medical and Dental Officers of England into the use of general anaesthesia and conscious sedation in primary care.³ The result of this report effectively removed general anaesthesia (GA) from a general practice setting and encouraged a focus upon behavioural management and conscious sedation as methods for the control of dental anxiety.

Conscious sedation is defined as:

A technique in which the use of a drug or drugs produces a state of depression of the central nervous system enabling treatment to be carried out, but during which verbal contact with the patient is maintained throughout the period of sedation. The drugs and techniques used to provide conscious sedation for

dental treatment should carry a margin of safety wide enough to render loss of consciousness unlikely.⁴

Provision of sedation by primary practitioners varies between studies.^{5,6} In Wales, 12.1% of respondents to a survey provided conscious sedation in primary care.⁷ In contrast, approximately 56% of patients attending emergency clinics would prefer to be treated with conscious sedation.^{8,9} There is a significant demand for conscious sedation, although this may not be perceived similarly by patients and dentists. Ninety-eight percent of primary dental practitioners requested conscious sedation in referrals to a UK dental hospital, while 29% of patients opted for non-pharmacological methods following assessment.¹⁰ There is therefore a disparity between provision, demand and need for conscious sedation. Despite these differences, there is still a significant need for conscious sedation services.

¹Clinical Research Fellow/Honorary Staff Grade in Conscious Sedation and Special Care Dentistry, Applied Clinical Research and Public Health Group, School of Dentistry, Cardiff University, Heath Park, Cardiff, CF14 4XY
Correspondence to: Mr Stephen M. Woolley
Email: woolleyssm@cf.ac.uk

Online article number E10
Refereed Paper – accepted 7 November 2009
DOI: 10.1039/b9j8012009193
© British Dental Journal 2009; 206: E10

Bibliography

- Aartman, I. H., de Jongh, A., Makkes, P. and Hoogstraten, J. 1999. Treatment modalities in a dental fear clinic and the relation with general psychopathology and oral health. *British Dental Journal* 186(9), pp. 467-471.
- Aartman, I. H., de Jongh, A., Makkes, P. C. and Hoogstraten, J. 2000. Dental anxiety reduction and dental attendance after treatment in a dental fear clinic: a follow-up study. *Community Dentistry and Oral Epidemiology* 28(6), pp. 435-442.
- Abrahamsson, K. H., Berggren, U., Hakeberg, M. and Carlsson, S. G. 2001. Phobic avoidance and regular dental care in fearful dental patients: a comparative study. *Acta Odontologica Scandinavica* 59(5), pp. 273-279.
- Abrahamsson, K. H., Berggren, U., Hakeberg, M. and Carlsson, S. G. 2003. The importance of dental beliefs for the outcome of dental-fear treatment. *European Journal of Oral Sciences* 111(2), pp. 99-105.
- Abrahamsson, K. H., Berggren, U., Hallberg, L. and Carlsson, S. G. 2002a. Dental phobic patients' view of dental anxiety and experiences in dental care: a qualitative study. *Scandinavian Journal of Caring Sciences* 16(2), pp. 188-196.
- Abrahamsson, K. H., Berggren, U., Hallberg, L. R.-M. and Carlsson, S. G. 2002b. Ambivalence in Coping with Dental Fear and Avoidance: A Qualitative Study. *Journal of Health Psychology* 7(6), pp. 653-664.
- Abrahamsson, K. H., Berggren, U. and Carlsson, S. G. 2000. Psychosocial aspects of dental and general fears in dental phobic patients. *Acta Odontologica Scandinavica* 58(1), pp. 37-43.
- ADA. 1990. *Monitoring of Patients During Dental Anaesthesia or Sedation*. London: Association of Dental Anaesthetists.
- Adair, P. M., Bannister, J., Levitt, J., de Jongh, A., Durham, R. C. and Downie, M. 2003. *A Systematic (Cochrane) Review of Conscious Sedation for Dental Anxiety* [Online]. Available at: <http://www.cso.scot.nhs.uk/Publications/ExecSumms/JanMarch03/czg.4.2.44.doc> [Accessed: 22/09/10].
- Adams Holland, L. 1961. *Janus and the Bridge*. Rome: American Academy in Rome.
- Ahern, J., Stuber, J. and Galea, S. 2007. Stigma, discrimination and the health of illicit drug users. *Drug and Alcohol Dependence* 88(2-3), pp. 188-196.
- Allan, H. 2007. Experiences of Infertility: Liminality and the Role of the Fertility Clinic. *Nursing Inquiry* 14(2), pp. 132 -139.
- Allen, D. 2001. Narrating Nursing Jurisdiction: "Atrocity Stories" and "Boundary-Work". *Symbolic Interaction* 24(1), pp. 75-103.

- Allen, D. 2009. From Boundary Concept to Boundary Object: the practice and politics of care pathway development. *Social Science and Medicine* 69(3), pp. 354-361.
- Allen, E. M. and Girdler, N. M. 2005. Attitudes to conscious sedation in patients attending an emergency dental clinic. *Primary Dental Care* 12(1), pp. 27-32.
- Allen, W. A. 1989. Dental sedation. A review [letter]. *British Dental Journal* 166(1), p. 6.
- Allen, W. A. 1990. Anaesthesia, analgesia and sedation- the key to successful dentistry [letter]. *British Dental Journal* 168(6), pp. 229-230.
- Andrews, S. P. 1851. The Science of Society No. 1: The constitution of government. [Online]. Available at: <http://www.anarchism.net/scienceofsociety.htm> [Accessed: 29/06/2010].
- Archer, M., Bhaskar, R., Collier, A., Lawson, T. and Norrie, A. 1998. *Critical Realism: Essential Readings*. London, New York: Routledge.
- Armfield, J. M. 2008. A preliminary investigation of the relationship of dental fear to other specific fears, general fearfulness, disgust sensitivity and harm sensitivity. *Community Dentistry and Oral Epidemiology* 36(2), pp. 128-136.
- Armfield, J. M. 2010. Towards a better understanding of dental anxiety and fear: cognitions vs. experiences. *European Journal of Oral Sciences* 118(3), pp. 259-264.
- Armfield, J. M., Slade, G. D. and Spencer, A. J. 2008. Cognitive vulnerability and dental fear. *BMC Oral Health* 8, p. 2.
- Armfield, J. M., Slade, G. D. and Spencer, A. J. 2009. Dental fear and adult oral health in Australia. *Community Dentistry and Oral Epidemiology* 37(3), pp. 220-230.
- Armfield, J. M., Stewart, J. F. and Spencer, A. J. 2007. The vicious cycle of dental fear: exploring the interplay between oral health, service utilization and dental fear. *BMC Oral Health* 7, p. 1.
- Armstrong, D. 1983. *Political anatomy of the body: medical knowledge in Britain in the twentieth century*. Cambridge: Cambridge University Press.
- Ashforth, B. E., Tomiuk, M. A. and Kulik, C. T. 2008. Doing emotion in service encounters: service agents perception of emotional labor and emotional contagion 335-348. In: Ashkanasy, N.M. and Cooper, C.L. (Eds.) *Research companion to emotion in organizations*. Cheltenham, UK: Edward Elgar Publishing Ltd., pp. 335-348.
- Atkinson, P. 1976. *The Clinical Experience*. [Unpublished] Ph.D. University of Edinburgh.
- Atkinson, P. 1995. *Medical talk and medical work : the liturgy of the clinic*. London: SAGE Ltd.

- Atkinson, P. 1997. *The Clinical Experience : the Construction and Reconstruction of Medical Reality*. 2nd ed. Aldershot: Ashgate.
- Atkinson, P. 2006. *Everyday Arias*. Lanham: AltaMira Press.
- Atkinson, P. 2009. Illness Narratives Revisited: The Failure of Narrative Reductionism. *Sociological Research Online* 14(5), p. 16.
- Atkinson, P., Coffey, A. and Delamont, S. 2003. *Key Themes in Qualitative Research: Continuities and Change*. Walnut Creek: Alta Mira Press.
- Atkinson, P. and Housley, W. 2003. *Interactionism: An Essay in Sociological Amnesia*. Thousand Oaks: SAGE Publications Inc.
- Atkinson, P. and Silverman, D. 1997. Kundera's 'Immortality': the interview society and the invention of the self. *Qualitative Inquiry* 3(3), pp. 304-325.
- Austin, J. L. 1976. *How To Do Things With Words: The William James Lectures delivered at Harvard University in 1955*. 2nd ed. Oxford: Oxford University Press.
- Averley, P., Hobman, R., Bond, S., Girdler, N. M. and Steele, J. 2008. Investigating the lived experiences of children and their parents who have been referred to a primary care sedation service. *SAAD Digest* 24, pp. 3-12.
- Azaryahou, M. 2005. The beach at the end of the world: Eilat in Israeli popular culture. *Social and Cultural Geography* 6(1), pp. 117-133.
- BACP. 2010. *Ethical principles of counselling and psychotherapy* [Online]. British Association of Counselling and Psychotherapy. Available at: http://www.bacp.co.uk/ethical_framework/ethics.php [Accessed: 20/12/11].
- Baker, C. 2004. Membership Categorization and Interview Accounts. In: Silverman, D. (Ed.) *Qualitative Research: Theory, Method, and Practice*. Thousand Oaks: SAGE Publications Inc., pp. 162-176.
- Baker, R. A., Farrer, S., Perkins, V. J. and Sanders, H. 2006. Emergency dental clinic patients in South Devon, their anxiety levels, expressed demand for treatment under sedation and suitability for management under sedation. *Primary Dental Care* 13(1), pp. 11-18.
- Bal Krishnan, M., Simmonds, R. S. and Tagg, J. R. 2000. Dental caries is a preventable infectious disease. *Australian Dental Journal* 45(4), pp. 235-245.
- Barker, I., Butchart, D. G. M., Gibson, J., Lawson, J. I. M. and Mackenzie, N. 1986. I. V. Sedation For Conservative Dentistry: A Comparison Of Midazolam And Diazepam. *British Journal of Anaesthesia* 58(4), pp. 371-377.
- Barker, J. C. and Horton, S. B. 2008. An ethnographic study of Latino preschool children's oral health in rural California: Intersections among family, community, provider and regulatory sectors. *BMC Oral Health* 8(8).
- Baszanger, I. 1998a. *Inventing Pain Medicine: from the Laboratory to the Clinic*. New Brunswick, New Jersey: Rutgers University Press, pp. 119-143.

- Baszanger, I. 1998b. Pain Physicians: All Alike, All Different. In: Berg, M. and Mol, A. (Eds.) *Differences in Medicine: Unraveling Practices, Techniques, and Bodies*. Durham: Duke University Press, pp. 119-143.
- Beckham, S. B. 2004. The American Front Porch: Women's Liminal Space. In: Delaney, C.L. (Ed.) *Investigating Culture: An Experiential Introduction to Anthropology*. London: Blackwell Publishing Ltd., pp. 64 -74.
- Beels, C. C. 2007. Psychotherapy as a rite of passage. *Family Process* 46(4), pp. 421-436.
- Bell, C. N. A. and Cowpe, J. G. 1999. Intravenous Sedation [letter]. *British Dental Journal* 186(9), p. 427.
- Berg, M. 1997. Problems and promises of the protocol *Social Science & Medicine* 44(8), pp. 1081-1088.
- Berge, T. I. 1999. Acceptance and side effects of nitrous oxide oxygen sedation for oral surgical procedures. *Acta Odontologica Scandinavica* 57(4), pp. 201-206.
- Berggren, U. 1986. Long-term effects of two different treatments for dental fear and avoidance. *Journal of Dental Research* 65(6), pp. 874-876.
- Berggren, U. 1993. Psychosocial effects associated with dental fear in adult dental patients with avoidance behaviours. *Psychology and Health* 8(2-3), pp. 185-196.
- Berggren, U. and Meynert, G. 1984. Dental fear and avoidance: causes, symptoms, and consequences. *Journal of the American Dental Association* 109(2), pp. 247-251.
- Berne, E. 1967. *Games people play: the psychology of human relationships*. Harmondsworth: Penguin.
- Bernstein, D. A., Kleinknecht, R. A. and Alexander, L. D. 1979. Antecedents of dental fear. *Journal of Public Health Dentistry* 39(2), pp. 113-124.
- Bhaskar, R. 1979. *The Possibility of Naturalism: A Philosophical Critique of the Contemporary Human Sciences*. Brighton: The Harvester Press Ltd.
- Bhaskar, R. 2008 [1975]. *A Realist Theory of Science*. 2nd Edition ed. London: Verso.
- Bickerstaff, K. and Simmons, P. 2004. The right tool for the job? Modeling, spatial relationships, and styles of scientific practice in the UK foot and mouth crisis. *Environment and Planning D: Society and Space* 22(3), pp. 393-412.
- Blain, K. M. and Hill, F. J. 1998. The use of inhalation sedation and local anaesthesia as an alternative to general anaesthesia for dental extractions in children. *British Dental Journal* 184(12), pp. 608-611.
- Bloor, M., Fincham, B. and Sampson, H. 2007. *Qualiti (NCRM) Commissioned Inquiry into the Risk to Well-Being of Researchers in Qualitative Research*. Cardiff: Cardiff University School of Social Sciences.

- Bloor, M., Fincham, B. and Sampson, H. 2010. Unprepared for the Worst: Risks of Harm for Qualitative Researchers. *Methodological Innovations Online* 5(1), pp. 45-55.
- Blumer, H. 1969. *Symbolic Interactionism: Perspective and Method*. Englewood Cliffs: Prentice-Hall, Inc.
- Bolton, S. C. 2000. Who cares? offering emotion work as a 'gift' in the nursing labour process. *Journal of Advanced Nursing* 32 (3), pp. 580-586.
- Bolton, S. C. 2001. Changing faces: nurses as emotional jugglers. *Sociology of Health & Illness* 23(1), pp. 85-100.
- Bond, T. 2000. *Standards and Ethics for Counselling in Action*. 2nd ed. London: SAGE Publications Ltd.
- Bourdieu, P. 1977. *Outline of a Theory of Practice*, Cambridge, Cambridge University Press.
- Boyle, C. A., Newton, T., Heaton, L. J., Afzali, S. and Milgrom, P. 2010. What happens after referral for sedation? *British Dental Journal* 208, p. E22.
- Boyle, C. A., Newton, T. and Milgrom, P. 2009. Who is referred for sedation for dentistry and why? *British Dental Journal* 206(6), p. E12.
- Bracha, H. S., Vega, E. M. and Vega, C. B. 2006. Posttraumatic dental-care anxiety (PTDA): Is "dental phobia" a misnomer? *Hawaii Dental Journal* 37(5), pp. 17-19.
- Brannen, J. 1988. Research note: the study of sensitive subjects. *Sociological Review* 36(3), pp. 552-563.
- BSA. 2002. *Statement of Ethical Practice for the British Sociological Association*. Durham: British Sociological Association.
- Britton, J., Keux, J. L. and Godwin, G. 1838. *A Dictionary of the Architecture and Archaeology of the Middle Ages: Including Words Used by Ancient and Modern Authors in Treating of Architectural and Other Antiquities: With Etymology, Definition, Description, and Historical Elucidation: Also, Biographical Notices of Ancient Architects*. London: Longman, Orme, Brown, Green, and Longman.
- Brontë, C. 1847 [2008]. *Jane Eyre*. 3rd ed. Forgotten Books.
- Brook, P. 2009. In critical defence of 'emotional labour': refuting Bolton's critique of Hochschild's concept. *Work Employment Society* 23(3), pp. 531-548.
- Brotheridge, C. M. and Grandey, A. A. 2002. Emotional Labor and Burnout: Comparing Two Perspectives of "People Work". *Journal of Vocational Behavior* 60(1), pp. 17-39.
- Bruce, A. and Davies, B. 2005. Mindfulness in Hospice Care: Practicing Meditation-in-Action. *Qualitative Health Research* 15(10), pp. 1329-1344.

- Bryant, A. and Charmaz, K., (Eds). 2007. *The SAGE Handbook of Grounded Theory*. Thousand Oaks: SAGE Publications Inc.
- Bryant, C. and Rood, P. 2010. The Effect of the Rapid Response Report (NPSA/2008/RRR011) on the sedation practice of the Oral Surgery department. In: *DSTG Annual Symposium*. Dublin. Dental Sedation Teachers Group.
- Bryman, A. 2004. *Social Research Methods*. 2nd ed. Oxford: Oxford University Press.
- Bryman, A. 2008. *Social Research Methods*. 3rd ed. Oxford: Oxford University Press.
- Buchanan, H. and Coulson, N. S. 2007. Accessing dental anxiety online support groups: An exploratory qualitative study of motives and experiences. *Patient Education and Counseling* 66(3), pp. 263-269.
- Buckingham, S., Marandet, E., Smith, F., Wainwright, E. and Diosi, M. 2006. The liminality of training spaces: Places of private/public transitions. *Geoforum* 37(6), pp. 895-905.
- Burgess, R. G. 1988. Conversations with a purpose: The ethnographic interview in educational research. In: Burgess, R.G. (Ed.) *Studies in Qualitative Methodology*. Vol. 1. Greenwich: JAI Press, pp. 137-155.
- Burke, F. J. T., Wilson, N. H. F., Christensen, G. J., Cheung, S. W. and Brunton, P. A. 2005. Contemporary dental practice in the UK: demographic data and practising arrangements. *British Dental Journal* 198(1), pp. 39-43.
- Bush, T. 2005. Overcoming the barriers to effective clinical supervision. *Nursing Times* [Online]. Available at: <http://nursingtimes.net/204072.article> [Accessed: 03/05/12].
- Caldicott, C. V., Dunn, K. A. and Frankel, R. M. 2003. Can patients tell when they are unwanted? "Turving" in residency training. *Patient Education and Counselling* 56(1), pp. 104-111.
- Campbell, D. 2011. Elderly NHS patients' harrowing plight is revealed in report. *The Guardian*. tuesday 15th February 2011.
- Campbell, D. F. 1997. *Banking on coal: Perspectives on a Cape Breton Community Within an International Context*. Sydney, Nova Scotia: Cape Breton University Press.
- Carlile, P. R. 2002. A pragmatic view of knowledge and boundaries: boundary objects in new product development. *Organization Science* 13(4), pp. 442-455.
- Carlone, D. 2006. The Ambiguous Nature of a Management Guru Lecture: Providing Answers While Deepening Uncertainty. *Journal of Business Communication* 43(2), pp. 89-112.

- Cash, D. W., Clark, W. C., Alcock, F., Dickson, N. M., Eckley, N., Guston, D. H., Jäger, J. and Mitchell, R. B. 2003. Knowledge systems for sustainable development. *Proceedings of the National Academy of Sciences of the United States of America* 100, pp. 8086-8091.
- Casper, M. J. 1998. *The Making of the Unborn Patient: a Social Anatomy of Fetal Surgery*. New Brunswick: Rutgers University Press.
- Casper, M. J. and Clarke, A. E. 1998. Making the Pap smear into the 'right tool' for the job: cervical cancer screening in the USA, circa 1940-95. *Social Studies of Science* 28(2), pp. 255-290.
- Chadwick, B. L., Thompson, S. and Treasure, E. T. 2006. Sedation in Wales: a questionnaire. *British Dental Journal* 201(7), pp. 453-456.
- Challon, P. D. 1999. Intra-venous Sedation [letter]. *British Dental Journal* 186(8), p. 368.
- Chanpong, B., Haas, D. A. and Locker, D. 2005. Need and demand for sedation or general anesthesia in dentistry: a national survey of the Canadian population. *Anesthesia Progress* 52(1), pp. 3-11.
- Charmaz, K. 2005. Grounded Theory in the 21st Century. In: Denzin, N.K. and Lincoln, Y.S. (Eds.) *The Sage Handbook of Qualitative Research*. 3rd ed. Thousand Oaks: SAGE Publications, Inc., pp. 507-536.
- Charmaz, K. 2006. *Constructing Grounded Theory: A Practical Guide Through Qualitative Analysis*. Los Angeles: SAGE Publications, Inc.
- Clarke, A. 1991. Social Worlds Theory as Organizational Theory. In: Maines, D. (Ed.) *Social Organization and Social Process: essays in Honor of Anselm Strauss*. New York: Walter de Gruyter Inc., pp. 119-158.
- Clarke, A. and Montini, T. 1993. The Many Faces of RU486: Tales of Situated Knowledges and Technological Contestations. *Science, Technology, & Human Values* 18(1), pp. 42-78.
- Clarke, A. E. 2003. Situational Analyses: Grounded Theory Mapping After the Postmodern Turn. *Symbolic Interaction* 26(4), pp. 553-576.
- Clarke, A. E. 2005. *Situational Analyses: Grounded Theory Mapping After the Postmodern Turn*. Thousand Oaks: SAGE Publications, Inc.
- Clarke, A. E. 2009. From Grounded Theory to Situational Analysis: What's New? Why? How? In: Morse, J.M. (Ed.) *Developing grounded theory: the second generation*. Walnut Creek, California: Left Coast Press Inc., pp. 194-233.
- Clarke, A. E. and Friese, C. 2007. Grounded Theorizing Using Situational Analysis. In: Bryant, A. and Charmaz, K. (Eds.) *The SAGE Handbook of Grounded Theory*. 3rd ed. Los Angeles: SAGE Publications Inc., pp. 363-397.
- Clarke, A. E. and Fujimura, J. H. 1992a. *The Right Tools for the Job: At Work in Twentieth Century Life Sciences*. Princeton, New Jersey: Princeton University Press.

- Clarke, A. E. and Fujimura, J. H. 1992b. What Tools? Which Jobs? Why Right? In: Clarke, A.E. and Fujimura, J.H. (Eds.) *The Right Tools for the Job: At Work in Twentieth Century Life Sciences*. Princeton, New Jersey: Princeton University Press, pp. 3-44.
- Clarke, A. E. and Star, S. L. 2003. Science, Technology and Medicine Studies In: Reynolds, L. and Herman, N. (Eds.) *The Handbook of Symbolic Interactionism*. Walnut Creek, California: Alta Mira Press, pp. 539-574.
- Clarke, A. E. and Star, S. L. 2007. The Social Worlds Framework: A Theory/Methods Package. In: Hackett, E. J., Amsterdamska, O., Lynch, M. and Wajcman, J. (Eds.) *The Handbook of Science and Technology Studies*. 3rd ed. Cambridge: The MIT Press, pp. 113-137.
- Clarkson, P. 1995. *The Therapeutic Relationship: in Psychoanalysis, Counselling Psychology and Psychotherapy*. London: Whurr Publishers Ltd.
- Coffey, A. and Atkinson, P. 1996. *Making Sense of Qualitative Data: Complementary Research Strategies*. Thousand Oaks: SAGE Publications Inc.
- Coffey, A. J. 1993. *Double Entry: The Professional and Organizational Socialization of Graduate Accountants*. [Unpublished] Ph.D. Cardiff University.
- Cohen, D. and Crabtree, B. F. 2006. *Qualitative Research Guidelines Project* [Online]. Princeton, NJ: Robert Wood Johnson Foundation. Available at: <http://www.qualres.org/HomeEval-3664.html> [Accessed: 11/08/11].
- Cohen, S. M., Fiske, J. and Newton, J. T. 2000. The impact of dental anxiety on daily living. *British Dental Journal* 189(7), pp. 385-390.
- Collins, H. M. 1984 [1992]. *Changing Order: Replication and Induction in Scientific Practice*. Chicago, London: University of Chicago Press.
- Collins, H. M. and Evans, R. J. 2002. The Third Wave of Science Studies: Studies of Expertise and Experience. *Social Studies of Sciences* 32(2), pp. 235-296.
- Collins, H. M. and Evans, R. J. 2007. *Rethinking Expertise*. Chicago, London: University of Chicago Press.
- Colquitt, C. 2011. *A Survey of the Use of Qualitative Research within Dentistry*. [Unpublished] BDS dissertation. Cardiff University
- Cooper, C. L., Watts, J. and Kelly, M. 1987. Job satisfaction, mental health, and job stressors among general dental practitioners in the UK. *British Dental Journal* 162(2), pp. 77-81.
- Corah, N. L., Gale, E. N. and Illig, S. J. 1978. Assessment of a dental anxiety scale. *Journal of the American Dental Association* 97(5), pp. 816 -819.
- Corah, N. L., O'Shea, R. M. and Ayer, W. A. 1985. Dentists' management of patients' fear and anxiety. *Journal of the American Dental Association* 110(5), pp. 734-736.

- COREC. 2008. *Ethics and Research Information Catalogue: Consent* [Online]. Central Office for Research Ethics Committees. Available at: <http://www.eric-on-line.co.uk/documents/CONSENT.doc> [Accessed: 13th June 2008].
- Coulson, N. S. and Buchanan, H. 2008. Self-reported efficacy of an online dental anxiety support group: a pilot study. *Community Dentistry and Oral Epidemiology* 36(1), pp. 43-46.
- Coulthard, P. 2007. Sedation for dental treatment [letter]. *Anaesthesia* 62(11), pp. 1184-1185.
- Coulthard, P. 2008. Conscious sedation [letter]. *British Dental Journal* 204(2), p. 52.
- Coulthard, P., Bridgman, C. M., Gough, L., Longman, L., Pretty, I. A. and Jenner, T. 2011. Estimating the need for dental sedation. 1. The Indicator of Sedation Need (IOSN)- a novel assessment tool. *British Dental Journal* 211(5), E10.
- Crabtree, B. F. and Miller, W. L. 1999. Introduction. In: Crabtree, B.F. and Miller, W.L. (Eds.) *Doing Qualitative Research*. 2nd ed. Thousand Oaks: SAGE Publications, Inc.
- Craig, D. and Skelly, M. 2004. *Practical Conscious Sedation*. London: Quintessence Publishing co. Ltd.
- Crowley-Matoka, M. 2005. Desperately seeking "normal": the promise and perils of living with kidney transplantation. *Social Science & Medicine* 61(4), pp. 821-831.
- Croucher R, Osborne D, Marcenes W and Sheiham A. 1998. Burnout and issues of the work environment reported by general dental practitioners in the United Kingdom. *Community Dental Health* 15(1), pp. 40-43.
- Cunningham, S. D., Tschann, J., Gurvey, J. E., Fortenberry, J. D. and Ellen, J. M. 2002. Attitudes about sexual disclosure and perceptions of stigma and shame. *Sexually Transmitted Infections* 78(5), pp. 334-338.
- Curran, H. V. 1986. Tranquillising memories: a review of the effects of benzodiazepines on human memory. *Biological Psychology* 23(2), pp. 179-213.
- Dailey, Y.-M., Crawford, A. N., Humphris, G. and Lennon, M. A. 2001. Factors affecting dental attendance following treatment for dental anxiety in primary dental care. *Primary Dental Care* 8(2), pp. 51-56.
- Danermark, B., Ekström, M., Liselotee, Jakobsen and Karlsson, J. C. 1997. *Explaining Society: Critical Realism in the Social Sciences*. London, New York: Routledge.
- Davidoff, L. 1973. *The Best Circles: Society Etiquette and the Season*. London: Croom Helm Ltd.
- Davison, A. 2008. The trouble with nature: Ambivalence in the lives of urban Australian environmentalists. *Geoforum* 39(3), pp. 1284-1295.

- de Jongh, A., Van Der Burg, J., Van Overmeir, M., Aartman, I. and Van Zuuren, F. J. 2002. Trauma-related sequelae in individuals with a high level of dental anxiety. Does this interfere with treatment outcome? *Behaviour Research and Therapy* 40(9), pp. 1017-1029.
- de Jongh, A., Van Der Burg, J., Van Overmeir, M., Aartman, I. H. A. and Van Zuuren, F. J. 2003. Trauma-related sequelae in individuals with a high level of dental anxiety. *Community Dentistry and Oral Epidemiology* 31(1), pp. 52-58.
- DeCoster, V. A. 1997. Physician Treatment of Patient Emotions: An Application of the Sociology of Emotion. In: Erickson, R.J. and Cuthbertson-Johnson, B. (Eds.) *Social Perspectives on Emotion*. Vol. 4. New York, NY: JAI Press, pp. 151-178.
- Delamont, S. 2002. *Fieldwork in educational settings: methods, pitfalls and perspectives*. London: Routledge.
- Delamont, S. 2007. Arguments against Auto-Ethnography. In: *British Educational Research Association Annual Conference*. Institute of Education, University of London, 5-8 September 2007.
- Delamont, S. 2009. The only honest thing: autoethnography, reflexivity and small crises in fieldwork. *Ethnography and Education* 4(1), pp. 51-63.
- Delamont, S. and Atkinson, P. 1995. *Fighting Familiarity : Essays on Education and Ethnography*. Cresskill, New Jersey: Hampton Press.
- Dentith, G. E., Wilson, K. E., Dorman, M. L. and Girdler, N. M. 2010. An Audit of Patient referrals to the Sedation Department of Newcastle Dental Hospital. *Primary Dental Care* 17(1), pp. 21-27.
- Denzin, N. K. 1989. *The Research Act*. 3rd ed. Englewood Cliffs: Prentice-Hall, Inc.
- Denzin, N. K. and Lincoln, Y. S. 2005a. Introduction: The Discipline and Practice of Qualitative Research. In: Denzin, N.K. and Lincoln, Y.S. (Eds.) *The Sage Handbook of Qualitative Research*. 3rd ed. Thousand Oaks: SAGE Publications, Inc., pp. 20-32.
- Denzin, N. K. and Lincoln, Y. S. 2005b. *The Sage Handbook of Qualitative Research*. 3rd ed. Thousand Oaks: SAGE Publications, Inc.
- Devine, V., Adelson, R., Goldstein, J., Valins, S. and Davison, G. C. 1974. Controlled Test of the Analgesic and Relaxant Properties of Nitrous Oxide. *Journal of Dental Research* 53(2), pp. 486-490.
- Dey, I. 2007. Grounded Theory. In: Seale, C., Gobo, G., Gubrium, J. F. and Silverman, D. (Eds.) *Qualitative Research Practice: Concise Paperback Edition*. Thousand Oaks: SAGE Publications, Inc., pp. 80-93.
- Dickinson, C. 2011. *DSTG Membership* [email] (Personal communication, 05/05/2011).
- Dingwall, R. 1977. Atrocity Stories and Professional Relationships. *Work and Occupations* 4(4), pp. 371-396.

- Dixon, R. A., Kenyon, C., Marsh, D. R. G. and Thornton, J. A. 1986. Midazolam in conservative dentistry: A cross-over trial. *Anaesthesia* 41(3), pp. 276-281.
- DoH. 2000. *A Conscious Decision: A Review of the Use of General Anaesthesia and Conscious Sedation in Primary Care. Report of an Expert Group Chaired by the Chief Medical and Dental Officer*. Department of Health.
- DoH. 2005. Standard general dental services (GDS) contract. London: Department of Health.
- DoH. 2006. Standard GDS Contract (revised March 2006). London: Department of Health.
- DoH. 2007. *Guidelines for the appointment of dentists with a special interest (DwSI) in conscious sedation* [Online]. Department of Health. Available at: http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_081551 [Accessed: 27/08/2010].
- DoH. 2009. *Department of Health: Departmental Report 2009* [Online]. Department of Health. Available at: http://www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/documents/digitalasset/dh_100670.pdf [Accessed: 25/08/10].
- Donaldson, M. S., Yordy, K. D., Lohr, K. N. and Vanselow, N. A. (Eds.) 1996. *Primary Care: America's Health in a New Era*. Washington D.C.: Institute of Medicine.
- Douglas, M. 1966 [2002]. *Purity and Danger: An Analysis of Concept of Pollution and Taboo*. London: Routledge.
- DSTG. 1999. Sedation in Dentistry: Undergraduate Training. [Online]. Dental Sedation Teachers Group. Available at: <http://www.dstg.co.uk/teaching/ugrad-teaching> [Accessed: 30/08/09].
- DSTG. 2000. *Sedation in Dentistry: The Competent Graduate*. London: Dental Sedation Teachers Group.
- DSTG. 2003. *Training for Safe Practice in Advanced Sedation Techniques for Adult Patients*. London: Dental Sedation Teachers Group.
- DSTG. 2005. *Training in Conscious Sedation for Dentistry*. London: Dental Sedation Teachers Group.
- DSTG. 2008. *Conscious Sedation in Dentistry: Standards for Postgraduate Education*. London: Dental Sedation Teachers Group.
- DSTG and SAAD. 2001. *Conscious Sedation: A Referral Guide for Dental Practitioners*.
- Duncan, B., Hart, G., Scoular, A. and Bigrigg, A. 2001. Qualitative analysis of psychosocial impact of diagnosis of Chlamydia trachomatis: implications for screening. *British Medical Journal* 322(7280), pp. 195-199.

- Durham, J., Steele, J. G., Wassell, R. W. and Exley, C. 2010. Living with Uncertainty: Temporomandibular Disorders. *Journal of Dental Research* 89(8), pp. 827-830.
- Edmunds, D. H. and Rosen, M. 1989. Management of anxiety in dental practice in the UK. *British Dental Journal* 166(7), pp. 253-255.
- Edwards, C. 2005. *Turning Houses into Homes: A History of the Retailing and Consumption of Domestic Furnishings*. Aldershot: Ashgate Publishing Ltd.
- Eitner, S., Wichmann, M., Paulsen, A. and Holst, S. 2006. Dental anxiety--an epidemiological study on its clinical correlation and effects on oral health. *Journal of Oral Rehabilitation* 33(8), pp. 588-593.
- Eli, I., Uziel, N., Baht, R. and Kleinhauz, M. 1997. Antecedents of dental anxiety: learned responses versus personality traits. *Community Dentistry and Oral Epidemiology* 25(3), pp. 233-237.
- Elias, N. 2000. *The civilizing process: sociogenetic and psychogenetic investigations*. Oxford: Blackwell Publishers.
- Ellis, C. and Bochner, A. P. 2000. Autoethnography, Personal Narrative, Reflexivity: Researcher as Subject. In: Denzin, N.K. and Lincoln, Y.S. (Eds.) *The Sage Handbook of Qualitative Research*. 2nd ed. Thousand Oaks: SAGE Publications, Inc., pp. 733-768.
- Ellis, S. 1996. Response to intravenous midazolam sedation in general dental practice. *British Dental Journal* 180(11), pp. 417-420.
- Ellis, S. 1999. Sedation drug use [letter]. *British Dental Journal* 186(10), p. 487.
- Emerson, J. P. 1970. Behavior in Private Places: Sustaining Definitions of Reality in Gynecological Examinations. *Recent Sociology, No. 2: Patterns of Communicative Behaviour*. London: Collier-Macmillan, pp. 74-97.
- Erickson, R. J. and Grove, W. J. C. 2008. Emotional Labor and Health Care. *Sociology Compass* 2(2), pp. 704-733.
- Exley, C. 2009. Bridging a Gap: the (lack of a) sociology of oral health and healthcare. *Sociology of Health & Illness* 31(7), pp. 1093-1108.
- Facco, E., Zanette, G. and Manani, G. 2008. Italian Version of Corah's Dental Anxiety Scale: Normative Data in Patients Undergoing Oral Surgery and Relationship With the ASA Physical Status Classification. *Anesthesia Progress* 55(4), pp. 109-115.
- Felton, A., Chapman, A. and Felton, S. 2009. *Basic Guide to Oral Health Education and Promotion*. Chichester: Wiley-Blackwell.
- Ferry, D. and Debusse, D. 2008. Sedation restrictions [letter]. *British Dental Journal* 204(9), pp. 475-476.
- Fiske, J. and Lewis, D. 2000. *The Development of Standards for Domiciliary Dental Care Services: Guidelines and Recommendations*. BSDH.

- Fitzpatrick, S. 2011. *A Survey of Staffing Levels of Dental Clinical Academics in UK Dental Schools as at 31 July 2010: A report by the Dental Schools Council*. London: Dental Schools Council.
- Flanders, J. 2004. *The Victorian House: Domestic Life from Childbirth to Deathbed*. London: Harper Perennial.
- Flick, U. 2006. *An Introduction to Qualitative Research*. 3rd ed. London: SAGE Publications Ltd.
- Foley, J. 2002. The way forward for dental sedation and primary care? *British Dental Journal* 193(3), pp. 161-164.
- Forss, A., Tishelman, C., Widmark, C. and Sachs, L. 2004. Women's experiences of cervical cellular changes: an unintentional transition from health to liminality? *Sociology of Health & Illness* 26(3), pp. 306-325.
- Forsyth, T. 2003. *Critical Political Ecology: The Politics of Environmental Science*. London and New York: Routledge.
- Forsyth, T. 2005. *The political ecology of the ecosystem approach for forests* [Online]. Available at: <http://eprints.lse.ac.uk/4743/> [Accessed: 29/07/10].
- Fortenberry, J. D., Mcfarlane, M., Bleakley, A., Bull, S., Fishbein, M., Grimley, D. M., Malotte, C. K. and Stoner, B. P. 2002. Relationships of Stigma and Shame to Gonorrhoea and HIV Screening. *American Journal of Public Health* 92(3), pp. 378-381.
- Fosket, J. 2004. Constructing "High-Risk Women": The Development and Standardization of a Breast Cancer Risk Assessment Tool. *Science, Technology, & Human Values* 29(3), pp. 291-313.
- Foucault, M. 1963 [2003]. *The Birth of the Clinic: An Archaeology of Medical Perception*. London: Routledge.
- Foucault, M. 1995. *Discipline and Punish: the birth of the prison*. 2nd ed. New York: Vintage Books.
- Fox, N. J. 2011. Boundary Objects, Social Meanings and the Success of New Technologies. *Sociology* 45(1), pp. 70-85.
- Freeman, R. 1998. A psychodynamic theory for dental phobia. *British Dental Journal* 184(4), pp. 170-172.
- Freeman, R., Clarke, H. M. M. and Humphris, G. M. 2007. Conversion tables for the Corah and Modified Dental Anxiety Scales. *Community Dental Health* 24(1), pp. 49-54.
- Freidson, E. 1970. *Professional Dominance: The Social Structure of Medical Care*. New York: Atherton Press, Inc.
- Friedman, N. 1967. Introsedation. In: McCarthy, F. (Ed.) *Emergencies in Dental Practice*. Philadelphia: W.B.Saunders and Co.

- Friedman, N. 1983. Introsedation: the treatment of fear in the dental patient. *Journal of Dental Education* 47(2), pp. 91-95.
- Friese, C. 2007. *Enacting Conservation and Biomedicine: Cloning Animals of Endangered Species in the Borderlands of the United States*. University of California.
- Fujimura, J. H. 1987. Constructing 'Do-Able' Problems in Cancer Research: Articulating Alignment. *Social Studies of Science* 17(2), pp. 257-293.
- Fujimura, J. H. 1988. Crafting science: Standardized packages, boundary objects, and "translation". *Social Problems* 35(3), pp. 261-283.
- Fujimura, J. H. 1992. Crafting science: Standardized packages, boundary objects, and "translation". In: Pickering, A. (Ed.) *Science as practice and culture*. Chicago: University of Chicago Press, pp. 168-211.
- Gabe, J., Bury, M. and Elston, M. 2004. *Key Concepts in Medical Sociology* London: SAGE Publications Ltd.
- Gadamer, H.-G. 1975 [2004]. *Truth and Method*. 2nd, Revised ed. London, New York: Continuum.
- Gardner, K. and Chapple, A. 1999. Barriers to referral in patients with angina: qualitative study. *British Medical Journal* 319(7207), pp. 418-421.
- Garrety, K. and Badham, R. 1999. Trajectories, Social Worlds, and Boundary Objects: A Framework for Analyzing the Politics of Technology. *Human Factors and Ergonomics in Manufacturing* 9(3), pp. 277-290.
- Gasser, L. 1986. The integration of computing and routine work. *ACM Transactions on Information Systems (TOIS) - Special issue: selected papers from the conference on office information systems* 4(3), pp. 205-225.
- GDC. 1997a. *The First Five Years: The Undergraduate Dental Curriculum*. London: General Dental Council.
- GDC. 1997b. *Maintaining Standards. Guidance to dentists on professional and personal conduct*. London: General Dental Council.
- GDC. 2001. *Maintaining Standards. Guidance to dentists on professional and personal conduct*. London: General Dental Council.
- GDC. 2002. *The First Five Years: A Framework for Undergraduate Dental Education*. London: General Dental Council.
- GDC. 2005. *Standards for Dental Professionals*. London: GDC.
- GDC. 2010. *CPD Requirements* [Online]. General Dental Council. Available at: <http://www.gdc-uk.org/Current+registrant/CPD+requirements/> [Accessed: 15/10/2010].
- GDC. 2011. *Look for a Specialist* [Online]. General Dental Council. Available at: <http://www.gdc-uk.org/Membersofpublic/Lookforaspecialist/Pages/default.aspx> [Accessed: 02/04/2011].

- Geer, B. 1964. First Days in the Field. *In: Hammond, P.E. (Ed.) Sociologists at Work: Essays on the Craft of Social Research.* New York: Basic Books Inc., pp. 322-344.
- Gerson, E. M. 1983. Scientific Work and Social Worlds. *Knowledge: Creation, Diffusion, Utilization* 4(3), pp. 357-377.
- Gibson, B. 1997. *Dangerous dentaling: A grounded theory of HIV and dentistry.* [Unpublished] Ph.D. Queens University of Belfast.
- Gibson, B. 2002. The Place of Qualitative Research in Public Health Dentistry. *Journal of Public Health Dentistry* 62(1), pp. 3-4.
- Giddens, A. 1990. *The Consequences of Modernity.* Stanford: Stanford University Press.
- Giddens, A. 1999. Risk and Responsibility. *The Modern Law Review* 62(1), pp. 1-10.
- Gieryn, T. F. 1983. Boundary-work and the demarcation of science from non-science: strains and interests in professional ideologies of scientists. *American Sociological Review* 48(6), pp. 781-795.
- Girdler, N. 1996. Sedation in primary and secondary dental health care [letter]. *British Dental Journal* 180(9), p. 325.
- Girdler, N. 1999. Safe Sedation. *British Dental Journal* 186(4), p. 158.
- Girdler, N. M., Hill, C. M. and Wilson, K. E. 2009. *Clinical Sedation in Dentistry.* Chichester: Wiley-Blackwell.
- Glaser, B. G. 1978. *Theoretical Sensitivity : Advances in the Methodology of Grounded Theory.* Mill Valley: Sociology Press.
- Glaser, B. G. 1992. *Emergence vs Forcing : Basics of Grounded Theory Analysis* Mill Valley: Sociology Press.
- Glaser, B. G. and Strauss, A. L. 1967. *The Discovery of Grounded Theory: strategies for qualitative research.* New York: Aldine de Gruyter Inc., p. 262.
- Gobo, G. 2007. Sampling, Representativeness and Generalizability. *In: Seale, C., Gobo, G., Gubrium, J. F. and Silverman, D. (Eds.) Qualitative Research Practice: Concise Paperback Edition.* Thousand Oaks: SAGE Publications, Inc., pp. 405-426.
- Gobo, G. 2008. *Doing Ethnography.* Los Angeles: SAGE Publications Inc.
- Goffman, E. 1959 [1990]. *The Presentation of Self in Everyday Life.* London: Penguin Books Ltd.
- Goffman, E. 1961. *Encounters: Two Studies in the Sociology of Interaction.* Indianapolis: Bobbs-Merrill Company Inc.

- Goffman, E. 1967. *Interaction Ritual: Essays on Face-to-Face Behavior*. New York: Pantheon Books.
- Gomart, E. 2002. Towards a generous constraint: freedom and coercion in a French addiction treatment. *Sociology of Health & Illness* 24(5), pp. 517-549.
- Goodall, E. M., File, S. E., Sanders, F. L. and Skelly, A. M. 1994. Self-ratings by phobic dental patients during dental treatment: greater improvement with nitrous oxide than midazolam. *Human Psychopharmacology: Clinical and Experimental* 9(3), pp. 203-209.
- Goodwin, M., Coulthard, P., Pretty, I. A., Bridgman, C., Gough, L. and Sharif, M. O. 2012. Estimating the need for dental sedation. 4. Using IOSN as a referral tool. *British Dental Journal* 212(5), E9.
- Goodwin, M. and Pretty, I. A. 2011. Estimating the need for dental sedation. 3. Analysis of factors contributing to non-attendance for dental treatment in the general population, across 12 English primary care trusts. *British Dental Journal* 211(12), pp. 599-603.
- Gorman, M. E. 2002. Levels of Expertise and Trading Zones. *Social Studies of Science* 32(5-6), pp. 933-938.
- Gorter, R. C., Albrecht, G., Hoogstraten, J. and Eijkman, M. A. J. 1999. Professional burnout among Dutch dentists. *Community Dentistry and Oral Epidemiology* 27(2), pp. 109-116.
- Gorter, R. C. and Freeman, R. 2011. Burnout and engagement in relation with job demands and resources among dental staff in Northern Ireland. *Community Dentistry and Oral Epidemiology* 39(1), pp. 87-95.
- Graham, R. 2006. Lacking Compassion - Sociological Analyses of the Medical Profession. *Social Theory & Health* 4(1), pp. 43-63.
- Gray, B. 2009. The emotional labour of nursing – Defining and managing emotions in nursing work. *Nurse Education Today* 29(2), pp. 168-175.
- Green, J. and Thorogood, N. 2009. *Qualitative Methods for Health Research*. 2nd ed. London: SAGE Publications Ltd.
- Greenblatt, D. J. 1992. Pharmacology of benzodiazepine hypnotics. *Journal of Clinical Psychiatry* 53(suppl), pp. s7-s13.
- Greisemer, J. R. 1992. The Role of instruments. In: Clarke, A.E. and Fujimura, J.H. (Eds.) *The Right Tools for the Job: At Work in Twentieth Century Life Sciences*. Princeton, New Jersey: Princeton University Press, pp. 47-76.
- Grier, K. C. 1988. *Culture & comfort: parlor making and middle-class identity, 1850-1930*. Washington, D.C.: Smithsonian Institution Press.
- Griffiths, H. S., Wilson, M. A. and Kincey, J. A. 1998. Anxiety levels, patient satisfaction and failed appointment rate in anxious patients referred by general practitioners to a dental hospital unit. *British Dental Journal* 185(3), pp. 134-136.

- Gubrium, J. F. and Holstein, J. A. 2002. From the Individual Interview to the Interview Society. *In: Gubrium, J.F. and Holstein, J.A. (Eds.) Handbook of Interview Research: Context and Method*. Thousand Oaks: SAGE Publications Inc., pp. 3-32.
- Guston, D. H. 1999. Stabilizing the boundary between US politics and science: The role of the Office of Technology Transfer as a Boundary Organization. *Social Studies of Science* 29(1), pp. 87-111.
- Guston, D. H. 2001. Boundary Organizations in Environmental Policy and Science: An Introduction *Science, Technology, & Human Values* 26(4), pp. 399-408.
- Hagglin, C., Berggren, U., Hakeberg, M. and Margareta, A. 1996. Dental anxiety among middle-aged and elderly women in Sweden: a study of oral state, utilisation of dental services and concomitant factors. *Gerodontology* 13(1), pp. 25-42.
- Haigh, A. F. 1999. Single/multi drug use [letter]. *British Dental Journal* 187(1), p. 3.
- Hakeberg, M., Berggren, U. and Carlsson, S. G. 1990. A 10-year follow-up of patients treated for dental fear. *Scandinavian Journal of Dental Research* 98(1), pp. 53-59.
- Hakeberg, M., Berggren, U. and Carlsson, S. G. 1992a. Prevalence of dental anxiety in an adult population in a major urban area in Sweden. *Community Dentistry and Oral Epidemiology* 20(2), pp. 97-101.
- Hakeberg, M., Berggren, U., Carlsson, S. G. and Gröndahl, H. G. 1993a. Long-term effects on dental care behaviour and dental health after treatments for dental fear. *Anesthesia Progress* 40(3), pp. 72-77.
- Hakeberg, M., Berggren, U. and Gröndahl, H. G. 1993b. A radiographic study of dental health in adult patients with dental anxiety. *Community Dentistry and Oral Epidemiology* 21(1), pp. 27-30.
- Hakeberg, M., Klingberg, G., Noren, J. and Berggren, U. 1992b. Swedish dentists' perceptions of their patients. *Acta Odontologica Scandinavica* 50, pp. 245-252.
- Hallonsten, A.-L., Koch, G. and Schröder, U. 1983. Nitrous oxide-oxygen sedation in dental care. *Community Dentistry and Oral Epidemiology* 11(6), pp. 347-355.
- Hammersley, M. 1992. *What's Wrong With Ethnography?* London: Routledge.
- Hammersley, M. and Atkinson, P. 1995. *Ethnography: Principles in Practice*. 2nd ed. London: Routledge.
- Hammersley, M. and Atkinson, P. 2007. *Ethnography: Principles in Practice*. 3rd ed. London: Taylor and Francis.
- Harrow, A., Wells, M., Barbour, R. S. and Cable, S. 2008. Ambiguity and uncertainty: The ongoing concerns of male partners of women treated for breast cancer. *European Journal of Oncology Nursing* 12(4), pp. 349-356.

- Hatfield, E., Cacioppo, J. T. and Rapson, R. L. 1992. Primitive Emotional Contagion. *In: Clark, M.S. (Ed.) Review of Personality and Social Psychology: Emotion and Social Behaviour*. Vol. 14. Newbury Park, CA: SAGE, pp. 151-177.
- Haugejorden, O. and Klock, K. S. 2000. Avoidance of dental visits: the predictive validity of three dental anxiety scales. *Acta Odontologica Scandinavica* 58(6), pp. 255-259.
- Henderson, A. 2001. Emotional labor and nursing: an under-appreciated aspect of caring work. *Nursing Inquiry* 8(2), pp. 130-138.
- Henderson, S., Stacey, C. L. and Dohan, D. 2008. Social Stigma and the Dilemmas of Providing Care to Substance Users in a Safety-Net Emergency Department. *Journal of Health Care for the Poor and Underserved* 19(4), pp. 1335-1349.
- Hill, K. B., Hainsworth, J. M., Burke, F. J. and Fairbrother, K. J. 2008. Evaluation of Dentists' Perceived Needs Regarding Treatment of the Anxious Patient. *British Dental Journal* 204(8), E13.
- Hirsch, P. M. 1972. Processing Fads and Fashion: An Organization-Set Analysis of Cultural Industry Systems. *American Journal of Sociology* 77(4), pp. 639-659.
- Hochschild, A. R. 1979. Emotion Work, Feeling Rules, and Social Structure *American Journal of Sociology* 85(3), pp. 551-575.
- Hochschild, A. R. 1983. *The managed heart : commercialization of human feeling*. Berkeley: University of California Press.
- Holgate, H. S. and Longman, C. 1998. Some peoples' psychological experiences of attending a sexual health clinic and having a sexually transmitted infection. *Perspectives in Public Health* 118(2), pp. 94-96.
- Holmes, F. L. 1992. Manometers, Tissue Slices, and Intermediary Metabolism. *In: Clarke, A.E. and Fujimura, J.H. (Eds.) The Right Tools for the Job: At Work in Twentieth Century Life Sciences*. Princeton, New Jersey: Princeton University Press, pp. 151-171.
- Horst, G. and de Wit, C. A. 1993. Review of behavioural research in dentistry 1987-1992: Dental anxiety, dentist-patient relationship, compliance and dental attendance. *International Dental Journal* 43(3), pp. 265-273.
- Horton, S. and Barker, J. C. 2009. Rural Mexican immigrant parents' interpretation of children's dental symptoms and decisions to seek treatment. *Community Dental Health* 26(4), pp. 216-221.
- Hosey, M. T., Makin, A., Jones, R. M., Gilchrist, F. and Carruthers, M. 2004. Propofol intravenous conscious sedation for anxious children in a specialist paediatric dentistry unit. *International Journal of Paediatric Dentistry* 14(1), pp. 2-8.
- Howitt, M. 1829 [2002]. *The Spider and the Fly: Based on the Poem by Mary Howitt; With Illustrations by Tony DiTerlizzi*. London: Simon & Schuster.

- Huitema, D. and Turnhout, E. 2009. Working at the science-policy interface: a discursive analysis of boundary work at the Netherlands Environmental Assessment Agency. *Environmental Politics* 18(4), pp. 576-594.
- Humphris, G. 2001. Dentally-anxious patients- a study of secondary care referrals in Scotland. *British Dental Journal* 191(12), p. 676.
- Humphris, G., Dyer, T. and Robinson, P. G. 2009. The modified dental anxiety scale: UK general public population norms in 2008 with further psychometrics and effects of age. *BMC Oral Health* 9, p. 20.
- Humphris, G., Morrison, T. and Lindsay, S.J. 1995. The Modified Dental Anxiety Scale: UK norms and evidence for validity. *Community Dental Health* 12(3), pp. 143-150.
- Humphris, G. M. and Cooper, C. L. 1998. New stressors for GDP's in the past ten years: a qualitative study. *British Dental Journal* 185(8), pp. 404-406.
- Humphris, G. M., Freeman, R., Campbell, J., Tuutti, H. and D'souza, V. 2000. Further evidence for the reliability and validity of the Modified Dental Anxiety Scale. *International Dental Journal* 50(6), pp. 367-370.
- Hunter, B. and Smith, P. 2007. Emotional labour: Just another buzz word? *International Journal of Nursing Studies* 44(6), pp. 859-861.
- Huynh, T., Alderson, M. and Thompson, M. 2008. Emotional labour underlying caring: an evolutionary concept analysis. *Journal of Advanced Nursing* 64(2), pp. 195-208.
- IMDb. 2011. *Biography for Brandon Lee* [Online]. Available at: <http://www.imdb.com/name/nm0000488/bio> [Accessed: 18/08/11].
- Jacobs, M. 1998. *The Presenting Past: The core of psychodynamic counselling and therapy*. 2nd ed. Buckingham: Open University Press.
- Jacobs, M. 1999. *Psychodynamic Counselling in Action*. 2nd ed. London: SAGE Publications Ltd.
- Jacobs, S., Haas, D. A., Meechan, J. G. and May, S. 2003. Injection pain: comparison of three mandibular block techniques and modulation by nitrous oxide:oxygen. *Journal of the American Dental Association* 134(7), pp. 869-876.
- James, N. 1989. Emotional labour: skill and work in the social regulation of feelings. *The Sociological Review* 37(1), pp. 15-42.
- James, N. 1992. Care=organisation+physical labour+emotional labour. *Sociology of Health and Illness* 14(4), pp. 489-509.
- James, N. 1998. Emotional labour: skill and work in the social regulation of feelings. *In: Mackay, L., Soothill, K. and Melia, K. M. (Eds.) Classic texts in health care* By Oxford UK: Butterworth-Heinemann Ltd., pp. 219-225.

- Jameson, K., P.A. A., Shackley, P. and Steele, J. 2007. A comparison of the 'cost per child treated' at a primary care-based sedation referral service, compared to a general anaesthetic in hospital. *British Dental Journal* 203(6), E13.
- Jamous, H. and Peloille, B. 1970. Changes in the French University-Hospital System. *In: Jackson, J.A. (Ed.) Professions and professionalization*. Cambridge: Cambridge University Press, pp. 109-152.
- Jasanoff, S. S. 1987. Contested Boundaries in Policy-Relevant Science. *Social Studies of Science* 17(2), pp. 195-230.
- Johnson, I., Chestnutt, I. and Smith, A. 2010. Dental Decisions – An Emotional Experience? *Dental Update* 37(10), pp. 700-705.
- Kaaka, T., Milgrom, P., Coldwell, S. E., Getz, T., Weinstein, P. and Ramsay, D. S. 1998. Dental fear among university students: implications for pharmacologic research. *Anesthesia Progress* 45(2), pp. 62-67.
- Kauffman, E., Sher Rand, R., Gordon, M. and Sgan Cohen, H. 1992. Dental anxiety and oral health in young Israeli male adults. *Community Dental Health* 9(2), pp. 125-132.
- Kelly, D., Ross, S., Gray, B. and Smith, P. 2000. Death, dying and emotional labour—problematic dimensions of the bone marrow transplant. *Journal of Advanced Nursing* 32(4), pp. 952-960.
- Kent, G. 1986. The typicality of therapeutic 'surprises'. *Behaviour Research and Therapy* 24(6), pp. 625-628.
- Kent, G. 1997. Dental phobias. *In: Davey, G. (Ed.) Phobias: A Handbook of Theory, Research and Treatment*. Chichester: Wiley & Sons Ltd, pp. 107-127.
- Kent, G., Rubin, G., Getz, T. and Humphris, G. 1996. The development of a scale to measure the social and psychological effects of severe dental anxiety: social attributes of the Dental Anxiety scale. *Community Dentistry and Oral Epidemiology* 24(6), pp. 394-397.
- Kim, H. J. 2008. Hotel service providers' emotional labor: The antecedents and effects on burnout. *International Journal of Hospitality Management* 27(2), pp. 151-161.
- King, K. and Humphris, G. M. 2010. Evidence to confirm the cut-off for screening dental phobia using the Modified Dental Anxiety Scale. *Social Science and Dentistry* 1(1), pp. 21-28.
- Kleinknect, R. A., Klepac, R. K. and Alexander, L. D. 1973. Origin and characteristics of fear of dentistry. *Journal of the American Dental Association* 86(4), pp. 842-848.
- Koch, T. 1996. Implementation of a hermeneutic inquiry in nursing: philosophy, rigour and representation. *Journal of Advanced Nursing* 24(1), pp. 174-184.

- Kulich, K. R., Berggren, U., Hallberg, L. R., Kulich, K. R., Berggren, U. and Hallberg, L. R. M. 2003. A qualitative analysis of patient-centered dentistry in consultations with dental phobic patients. *Journal of Health Communication* 8(2), pp. 171-187.
- Kvale, G., Berggren, U. and Milgrom, P. 2004. Dental fear in adults: a meta-analysis of behavioural interventions. *Community Dentistry and Oral Epidemiology* 32(4), pp. 250-264.
- Kvale, G., Raadal, M., Vika, M., Johnsen, B. H., Skaret, E., Vatnelid, H. and Oisma, I. 2002. Treatment of dental anxiety disorders. Outcome related to DSM-IV diagnoses. *European Journal of Oral Sciences* 110(2), pp. 69-74.
- Kvale, S. 1996. *InterViews: An Introduction to Qualitative Research Interviewing*. Thousand Oaks: SAGE Publications, Inc.
- Lee, R. M. 1993. *Doing research on sensitive topics*. London: SAGE Publications Ltd.
- Leitch, J. and Jauhar, S. 2006. A follow-up survey of the teaching of conscious sedation in dental schools of the United Kingdom and Ireland. *Anesthesia Progress* 53(2), pp. 43-48.
- Leitch, J. A., Anderson, K., Gambhir, S., Millar, K., Robb, N. D., Mchugh, S. and Kenny, G. N. 2004. A partially blinded randomised controlled trial of patient-maintained propofol sedation and operator controlled midazolam sedation in third molar extractions. *Anaesthesia* 59(9), pp. 853-860.
- Leitch, J. A. and Girdler, N. M. 2000. Conscious sedation: A survey of the teaching of conscious sedation in dental schools of the United Kingdom and Ireland *British Dental Journal* 188(4), pp. 211-216.
- Levenson, R. W. 1996. Biological substrates of empathy and facial modulation of emotion: Two facets of the scientific legacy of John Lanzetta *Motivation and Emotion* 20(3), pp. 185-204.
- Lévi-Strauss, C. 1963. *The Sorcerer and His Magic. Structural Anthropology*. New York: Basic Books.
- Levine, S. and Koziuff, M. A. 1978. The sick role: assessment and overview. *Annual Review of Sociology* 4, pp. 317-343.
- Levitt, J., MCGoldrick, P., Evans, D. and Mason, A. 1999. Sedation is not the only answer [letter]. *British Dental Journal* 186(10), pp. 487-488.
- Lincoln, Y. S. and Guba, E. G. 1985. *Naturalistic Inquiry*. Newbury Park, CA: SAGE Publications Inc.
- Lindsay, S. J. E., Humphris, G. M. and Barnby, G. 1987. Expectations and preferences for routine dentistry in anxious dental patients. *British Dental Journal* 163(4), pp. 120-124.
- Lingard, L. 2007. The rhetorical 'turn' in medical education: What have we learned and where are we going? *Advances in Health Sciences Education* 12(2), pp. 121-133.

- Liston, P. N. 1999. Sedation Service [letter]. *British Dental Journal* 186(5), p. 210.
- Little, J. M., Manley, M. C. G. and Craig, D. C. 2004. The GKT diploma in dental sedation- a judgement. *British Dental Journal* 197(6), pp. 337-341.
- Little, M., Jordens, C. F. C., Paul, K., Montgomery, K. and Philipson, B. 1998. Liminality: a major category of the experience of cancer illness. *Social Science and Medicine* 47(10), pp. 1485-1494.
- Locker, D. 2003. Psychosocial Consequences of Dental Fear and Anxiety. *Community Dentistry and Oral Epidemiology* 31(2), pp. 144-151.
- Locker, D., Liddell, A., Dempster, L. and Shapiro, D. 1999a. Onset of Dental Anxiety. *Journal of Dental Research* 78(3), pp. 790-796.
- Locker, D., Liddell, A. and Shapiro, D. 1999b. Diagnostic categories of dental anxiety: a population-based study. *Behaviour Research and Therapy* 37(1), pp. 25-37.
- Logan, T. 2001. *The Victorian Parlour: A Cultural Study*. Cambridge and New York: Cambridge University Press.
- Longman, L. P., Hibbert, S., Davies, M. and Humphris, G. 2000. Sedation agents [letter]. *British Dental Journal* 188(8), p. 354.
- Lorenzonia, I., Jones, M. and Turnpenny, J. R. 2007. Climate change, human genetics, and post-normality in the UK. *Futures* 39(1), pp. 65-82.
- Löwy, I. 1992. The Strength of Loose Concepts - Boundary Concepts, Federative Experimental Strategies and Disciplinary Growth: The Case of Immunology. *History of Science* 30(3), pp. 371-396.
- Mail Online. 2007. Toddler fools the art world into buying his tomato ketchup paintings. *Mail Online*. Available at: <http://dailymail.co.uk/news/article-499240/Toddler-fools-art-world-buying-tomato-ketchup-paintings.html> [Accessed: 06/10/11].
- Malamed, S. F. 1995. *Sedation: A Guide to Patient Management*. 3rd ed. St Louis: Mosby-Year Book Inc.
- Malamed, S. F. 2010. *Sedation: A Guide to Patient Management*. 4th ed. St Louis: Mosby.
- Malinowski, B. 1922. *Argonauts of the Western Pacific*. London: Routledge & Kegan Ltd.
- Martin, N. 1999. Intra-venous Sedation [letter]. *British Dental Journal* 186(5), p. 210.
- Maslach, C. and Jackson, S. E. 1981. The measurement of experienced burnout. *Journal Of Occupational Behaviour* 2(2), pp. 99-113.
- Mason, J. 2002. *Qualitative Researching*. 2nd ed. Thousand Oaks: Sage Publications Inc.

- Mays, N. and Pope, C. 1995. Qualitative research: Observational methods in health care settings. *British Medical Journal* 311(6998), pp. 182-184.
- McElroy, R. 2006. Aspects of Lifestyle and the Rise of Home Improvement. In: Smyth, G. and Croft, J. (Eds.) *Our house: the representation of domestic space in modern culture*. Amsterdam, NY: B.V. Rodopi, pp. 85-102.
- McGaw, C., Stilson, K. L. and Clark, L. D. 2011. *Acting is Believing*. 11th ed. Boston: Wadsworth Publishing Co Inc.
- McGoldrick, P., Levitt, J., de Jongh, A., Mason, A. and Evans, D. 2001. Referrals to a secondary care dental clinic for anxious adult patients: implications for treatment. *British Dental Journal* 191(12), pp. 686-688.
- McGrath, C. and Bedi, R. 2004. The association between dental anxiety and oral health-related quality of life in Britain. *Community Dentistry and Oral Epidemiology* 32(1), pp. 67-72.
- McLeod, J. 1998. *An Introduction to Counselling*. 2nd ed. Buckingham: Open University Press.
- McLoughlin, P. and Warin, M. 2008. Corrosive places, inhuman spaces: Mental health in Australian immigration detention. *Health & Place* 14(2), pp. 254-264.
- McNeil, D. W. and Berryman, M. L. 1989. Components of dental fear in adults? *Behaviour Research and Therapy* 27(3), pp. 233-236.
- Mead, G. H. 1934. *Mind, Self and Society*. Chicago: The University of Chicago Press.
- Meechan, J. G., Robb, N. D. and Seymour, R. A. 1998. *Pain and Anxiety Control for the Conscious Dental Patient*. Oxford: Oxford University Press.
- Mehrstedt, M., John, M. T., Tonnes, S. and Micheelis, W. 2007. Oral health-related quality of life in patients with dental anxiety. *Community Dentistry and Oral Epidemiology* 35(5), pp. 357-363.
- Mejía, G. C., Jamieson, L. M., Armfield, J. M. and Slade, G. D. 2010. Is dental anxiety an aetiologic factor in poor dental attendance? *Social Science and Dentistry* 1(1), pp. 29-36.
- Melia, K. M. 1996. Rediscovering Glaser. *Qualitative Health Research* 6(3), pp. 368-378.
- Menkes, D. B., Davison, M. P., Costello, S. A. and Jaye, C. 2005. Stereotactic radiosurgery: the patient's experience. *Social Science & Medicine* 60(11), pp. 2561-2573.
- Merritt, P., Hirshman, E., Hsu, J. and Berrigan, M. 2005. Metamemory without the memory: are people aware of midazolam-induced amnesia? *Psychopharmacology (Berl)* 177(3), pp. 336-343.
- Midgley, M. 2004. *The Myths We Live By*. London: Routledge.

- Milgrom, P. 2007. Enhancing Sedation Treatment for the Long Term: Pre-Treatment Behavioural Exposure. *SAAD Digest* 23, pp. 29-34.
- Milgrom, P. and Weinstein, P. 1993. Dental fears in general practice: new guidelines for assessment and treatment. *International Dental Journal* 43(3), pp. 288-293.
- Milgrom, P., Weinstein, P. and Getz, T. 1995. *Treating Fearful Patients*. Seattle: University of Washington Continuing Dental Education.
- Miller, J. and Glassner, B. 2004. The "Inside" and The "Outside": Finding realities in interviews. In: Silverman, D. (Ed.) *Qualitative Research: Theory, Method, and Practice*. Thousand Oaks: SAGE Publications Inc., pp. 125-139.
- Miller, K. I., Stiff, J. and Ellis, B. H. 1988. Communication and Empathy as Precursors to Burnout among Human Service Workers. *Communication Monographs* 55(3), pp. 250-265.
- Miller, W. L. and Crabtree, B. F. 2005. Clinical Research. In: Denzin, N.K. and Lincoln, Y.S. (Eds.) *The Sage Handbook of Qualitative Research*. 3rd ed. Thousand Oaks: SAGE Publications, Inc., pp. 605-639.
- Milsom, K. M., Tickle, M. and Blinkhorn, A. S. 2008. Is School Dental Screening a Political or a Scientific Intervention? *Journal of Dental Research* 87(10), pp. 996-899.
- Molloy, T. 2011. Darling's days in the grim world of finance *The Irish Independent*. Thursday October 06 2011.
- Moore, K. 1996. Organizing Integrity: American Science and the Creation of Public Interest Organizations, 1955-1975. *American Journal of Sociology* 101(6), pp. 1592-1627.
- Moore, L. J. 1997. "It's Like You Use Pots and Pans to Cook. It's the Tool": The Technologies of Safer Sex. *Science, Technology, & Human Values* 22(4), pp. 434-471.
- Moore, R., Birn, H., Kirkegaard, E., Brødsgaard, I. and Scheutz, F. 1993. Prevalence and characteristics of dental anxiety in Danish adults. *Community Dentistry and Oral Epidemiology* 21(5), pp. 292-296.
- Moore, R. and Brødsgaard, I. 1995. Differential diagnosis of odontophobic patients using the DSM-IV. *European Journal of Oral Sciences* 103(2), pp. 121-126.
- Moore, R. and Brødsgaard, I. 2001. Dentists' perceived stress and its relation to perceptions about anxious patients. *Community Dentistry and Oral Epidemiology* 29(1), pp. 73-80.
- Moore, R., Brødsgaard, I. and Birn, H. 1991. Manifestations, Acquisition and Diagnostic Categories of Dental Fear in a Self-Referral Population. *Behaviour Research and Therapy* 29(1), pp. 51-60.
- Moore, R., Brødsgaard, I. and Rosenberg, N. 2004. The contribution of embarrassment to phobic dental anxiety: a qualitative research study. *BMC Psychiatry* 4, p. 10.

- Morgan, C. L. and Skelly, A. M. 2005. Conscious sedation services provided in secondary care for restorative dentistry in the UK: a survey. *British Dental Journal* 198(10), pp. 631-635.
- Morris, A. J. and Burke, F. J. T. 2001. Primary and secondary dental care: how ideal is the interface. *British Dental Journal* 191(12), pp. 666-670.
- Morse, J. M. 2008. Does Informed Consent Interfere With Induction? *Qualitative Health Research* 18(4), pp. 439-440.
- Morse, J. M. 2009. The PI as Participant. *Qualitative Health Research* 19(12), p. 1655.
- Morse, J. M., Stern, P. N., Corbin, J., Bowers, B., Charmaz, K. and Clarke, A. E. 2009. *Developing grounded theory: the second generation*. Walnut Creek, California: Left Coast Press Inc.
- Mulholland, E. and van Wersch, A. 2007. Stigma, Sexually Transmitted Infections and Attendance at the GUM Clinic: An Exploratory Study with Implications for the Theory of Planned Behaviour. *Journal of Health Psychology* 12(1), pp. 17-31.
- Murphy, P. J., Erskine, R. and Langton, J. A. 1994. The effect of intravenously administered diazepam, midazolam and flumazenil on the sensitivity of upper airway reflexes. *Anaesthesia* 49(2), pp. 105-110.
- Nadin, G. and Coulthard, P. 1997. Memory and midazolam conscious sedation. *British Dental Journal* 183(11), pp. 399-407.
- Nakanishi, O., Amano, Y., Ishikawa, T., Azuma, M. and Imamura, Y. 1997. Effects of midazolam on pain sensations in the face. *Oral Surgery Oral Medicine Oral Pathology Oral Radiology & Endodontics* 84(1), pp. 11-15.
- Navon, L. and Morag, A. 2004. Liminality as biographical disruption: unclassifiability following hormonal therapy for advanced prostate cancer. *Social Science & Medicine* 58(11), pp. 2337-2347.
- NCGC. 2011. *Sedation in children and young people: Sedation for diagnostic and therapeutic procedures in children and young people*. National Clinical Guidance Centre.
- NDAC. 2006. *Conscious Sedation in Dentistry- Dental Clinical Guidance*. Dundee: National Dental Advisory Committee.
- Nettleton, S. 1986. Understanding dental health beliefs: an introduction to ethnography. *British Dental Journal* 161(4), pp. 145-147.
- Nettleton, S. 1989. Power and pain: The location of pain and fear in dentistry and the creation of a dental subject. *Social Science and Medicine* 29(10), pp. 1183-1190.
- Nettleton, S. 1992. *Power, Pain and Dentistry*. Buckingham: Open University Press.

- Nettleton, S. 2006a. 'I just want permission to be ill': Towards a sociology of medically unexplained symptoms. *Social Science & Medicine* 62(5), pp. 1167-1178.
- Nettleton, S. 2006b. *The Sociology of Health and Illness*. 2nd ed. Cambridge: Polity Press.
- Nettleton, S., Burrows, R. and Watt, I. 2008. How do You Feel Doctor? An Analysis of Emotional Aspects of Routine Professional Medical Work. *Social Theory & Health* 6(1), pp. 18-36.
- Newton, J. T. and Buck, D. J. 2000. Anxiety and Pain Measures in Dentistry: A Guide to Their Quality and Application. *Journal of the American Dental Association* 131(10), pp. 1449-1457.
- NHS Choices. 2010. *Consent to treatment* [Online]. Available at: <http://www.nhs.uk/conditions/Consent-to-treatment/Pages/Introduction.aspx> [Accessed: 14/02/2012].
- Nicolas, E., Collado, V., Faulks, D., Bullier, B. and Hennequin, M. 2007. A national cross-sectional survey of dental anxiety in the French adult population. *BMC Oral Health* 7, p. 12.
- NPSA. 2008. *Rapid Response Report [NPSA/2008/RRR011]: Reducing risk of overdose with midazolam injection in adults*. Nation Patient Safety Agency.
- Nunukoosing, K. 2005. The Problems With Interviews. *Qualitative Health Research* 15(5), pp. 698-706.
- Nuttall, N., Freeman, R., Beavan-Seymour, C. and Hill, K. 2011. Adult Dental Health Survey 2009 - Theme 8: Access and barriers to care. [Online]. Available at: http://www.ic.nhs.uk/webfiles/publications/007_Primary_Care/Dentistry/dentalsurvey09/AdultDentalHealthSurvey_2009_ExecutiveSummary.pdf [Accessed: 05/04/2011].
- O'Shea, R. M., Corah, N. L. and Ayer, W. A. 1984. Sources of dentists' stress. *Journal of the American Dental Association* 109(1), pp. 48-51.
- OED. 2009. *Oxford English Dictionary* [Online]. Oxford: Oxford University Press. Available at: <http://dictionary.oed.com> [Accessed: 25/11/09 2009].
- Olsen, K. 1999. *Daily Life in 18th-century England*. Westport, CT: Greenwood Publishing Group.
- Omdahl, B. L. and O'Donnell, C. 1999. Emotional contagion, empathic concern and communicative responsiveness as variables affecting nurses' stress and occupational commitment. *Journal of Advanced Nursing* 29(6), pp. 1351-1359.
- ONS. 2011. *Statistical Bulletin: Annual Mid-year Population Estimates, 2010*. Office for National Statistics.
- Oosterink, F. M. D., de Jongh, A. and Hoogstraten, J. 2009. Prevalence of dental fear and phobia relative to other fear and phobia subtypes. *European Journal of Oral Sciences* 117(2), pp. 135-143.

- Osborne D and Croucher R. Levels of burnout in general dental practitioners in the south-east of England. 1994. *British Dental Journal* 177(10), pp 372-377.
- Oswick, C. and Robertson, M. 2009. Boundary Objects Reconsidered: from Bridges and Anchors to Barricades and Mazes. *Journal of Change Management* 9(2), pp. 179-193.
- Owens, J. and Saeed, S. M. 2008. Exploring the oral health experiences of a rural population in Sudan. *International Dental Journal* 58(5), pp. 258-264.
- Parsons, T. 1951. Illness and the role of the physician: a sociological perspective. *American Journal of Orthopsychiatry* 21(3), pp. 452-460.
- Parsons, T. 1975. The Sick Role and the Role of the Physician Reconsidered. *The Milbank Memorial Fund Quarterly: Health and Society* 53(3), pp. 257-278.
- Pau, A., Nanjappa, S. and Diu, S. 2010. Evaluation of dental practitioners with special interest in minor oral surgery. 208(1), pp. 103-107.
- Pfeffer, N. 2009. How work reconfigures an 'unwanted' pregnancy into 'the right tool for the job' in stem cell research. *Sociology of Health & Illness* 31(1), pp. 98-111.
- Philo, C., Parr, H. and Burns, N. 2005. "An oasis for us": 'in-between' spaces of training for people with mental health problems in the Scottish Highlands. *Geoforum* 36(6), pp. 778-791.
- Platt, J. 1981. On interviewing one's peers. *British Journal of Sociology* 32(1), pp. 75-91.
- Pohjola, V., Lahti, S., Vehkalahti, M. M., Tolvanen, M. and Hausen, H. 2007. Association between dental fear and dental attendance among adults in Finland. *Acta Odontologica Scandinavica* 65(4), pp. 224-230.
- Postles, D. 2007. Micro-spaces: church porches in pre-modern England. *Journal of Historical Geography* 33(4), pp. 749-769.
- Poswillo, D. 1990. *General Anaesthesia, Sedation and Resuscitation in Dentistry-Report of an Expert Working Party prepared for the Standing Dental Advisory Committee*.
- Poulton, R., Waldie, K. E., Thomson, W. M. and Locker, D. 2001. Determinants of early- vs late-onset dental fear in a longitudinal-epidemiological study. *Behaviour Research and Therapy* 39(7), pp. 777-785.
- Preston-Whyte, R. 2004. The Beach as a Liminal Space. In: Lew, A. A., Hall, C. M. and Williams, A. M. (Eds.) *A Companion to Tourism*. London: Blackwell, pp. 349-359.
- Pretty, I. A., Goodwin, M., Coulthard, P., Bridgman, C. M., Gough, L., Jenner, T. and Sharif, M. O. 2011. Estimating the need for dental sedation. 2. Using IOSN as a health needs assessment tool. *British Dental Journal* 211(5), E11.
- Prior, L. 1988. The architecture of the hospital: A study of spatial organization and medical knowledge. *British Journal of Sociology* 39(1), pp. 86-113.

- Prior, L. 1992. The Local Space of Medical Discourse: Disease, Illness and Hospital Architecture. *In: Lachmund, J. and Stollberg, G. (Eds.) The Social Construction of Illness: Illness and Medical Knowledge in Past and Present.* Stuttgart: Koch, Neff & Oetinger & Co, pp. 67-84.
- Prior, L. 2007. Talking About the Gene for Cancer: A Study of Lay and Professional Knowledge of Cancer Genetics. *Sociology* 41(6), pp. 985-1001.
- Pritchard, A. and Morgan, N. 2006. Hotel Babylon? Exploring hotels as liminal sites of transition and transgression. *Tourism Management (2006)* 27(5), pp. 762-772.
- Pugsley, L. 1998. *Class of '97: Higher Education Markets and Choice.* [Unpublished] Ph.D. Cardiff University.
- Pugsley, L. and McCrorie, P. 2007. Improving medical education: Improving patient care. *Teaching and Teacher Education* 23(3), pp. 314-322.
- Punch, M. 1986. *The Politics and Ethics of Fieldwork.* London: SAGE Publications Ltd.
- Punch, M. 1994. Politics and Ethics in Qualitative Research. *In: Denzin, N.K. and Lincoln, Y.S. (Eds.) The Sage Handbook of Qualitative Research.* Thousand Oaks: SAGE Publications, Inc., pp. 83-104.
- Ragnarsson, E. 1998. Dental fear and anxiety in an adult Icelandic population. *Acta Odontologica Scandinavica* 56(2), pp. 100-104.
- Ragnarsson, E., Arnlaugsson, S., Karlsson, K. O., Magnusson, T. E. and Arnarson, E. O. 2003. Dental anxiety in Iceland: an epidemiological postal survey. *Acta Odontologica Scandinavica* 61(5), pp. 283-288.
- Ransford, N. J., Manley, M. C. G., Lewis, D. A., Thompson, S. A., Wray, L. J., Boyle, C. A. and Longman, L. P. 2010. Intranasal/intravenous sedation for the dental care of adults with severe disabilities: a multicentre prospective audit. *British Dental Journal* 208(12), pp. 565-569.
- Rapley, T. 2007. Interviews. *In: Seale, C., Gobo, G., Gubrium, J. F. and Silverman, D. (Eds.) Qualitative Research Practice: Concise Paperback Edition.* Thousand Oaks: SAGE Publications, Inc., pp. 15-33.
- RCA. 1999. *Standards and guidelines for general anaesthesia for dentistry.* London: Royal College of Anaesthetists.
- Reilly, D., Boyle, C. A. and Craig, D. C. 2009. Obesity and dentistry: a growing problem. *British Dental Journal* 207, pp. 171-175.
- Ribeiro, R. 2007a. The Language Barrier as an Aid to Communication. *Social Studies of Science* 37(4), pp. 561-584.
- Ribeiro, R. 2007b. The role of interactional expertise in interpreting: the case of technology transfer in the steel industry. *Studies in History and Philosophy of Science* 38(4), pp. 713-721.

- Rios-Santos, J. V., Reyes-Torres, M., Lopez-Jimenez, A., Morillo-Velazquez, J. M. and Bullon, P. 2010. Burnout and depression among Spanish periodontology practitioners. *Medicina Oral, Patología Oral y Cirugía Bucal* 15(5), pp. 813-819.
- Robb, N. D. 2010. Oral temazepam causing anxiety [letter]. *British Dental Journal* 209(1), p. 55.
- Robb, N. D. and Craig, D. 1999. Simple conscious sedation [letter]. *British Dental Journal* 187(1), p. 3.
- Ross, M. G. 1965. The Contributions of Social and Behavioral Sciences to the Health Sciences. *Journal of Dental Research* 44(6), pp. 1104-1111.
- Ryder, W. and Wright, P. A. 1988. Dental Sedation. A Review. *British Dental Journal* 165(6), pp. 207-216.
- Ryder, W. and Wright, P. A. 1989. Dental sedation. A review [letter]. *British Dental Journal* 166(1), pp. 6-7.
- SAAD. 1990. *Guidelines for Physiological Monitoring of Patients During Dental Anaesthesia or Sedation*. London: Society for the Advancement of Anaesthesia in Dentistry.
- SAAD. 2000. *Standards in Conscious Sedation for Dentistry. Report of an Independent Expert Working Group*. London: Society for the Advancement of Anaesthesia in Dentistry.
- SAAD. 2009. *Standardised Evaluation of Conscious Sedation Practice for Dentistry in the UK: A Toolkit for Implementing National Standards*. London: Society for the Advancement of Anaesthesia in Dentistry.
- Salisbury, J. 1994. *Becoming Qualified: An Ethnography of a Post Experience Teacher Training Course*. [Unpublished] Ph.D. Cardiff University.
- Sanders, M. J. and Turcotte, C. M. 2010. Occupational stress in dental hygienists. *Work* 35(4), pp. 455-465.
- Scambler, S., Low, E., Zoitopoulos, L. and Gallagher, J. E. 2011. Professional attitudes towards disability in special care dentistry. *Journal of Disability and Oral Health* 12(2), pp. 51-58.
- Scamell, M. 2011. The swan effect in midwifery talk and practice: a tension between normality and the language of risk. *Sociology of Health & Illness* 33(7), pp. 987-1001.
- Schuller, A. A., Willumsen, T. and Holst, D. 2003. Are There Differences in Oral Health and Oral Health Behavior Between Individuals With High and Low Dental Fear? *Community Dentistry and Oral Epidemiology* 31(2), pp. 116-121.
- Scott, S., Prior, L., Wood, F. and Gray, J. 2005. Repositioning the patient: the implications of being 'at risk'. *Social Science & Medicine* 60(8), pp. 1869-1879.
- Scott, V. 2009. *Conflict Resolution at Work for Dummies*. Hoboken, NJ: Wiley Publishing Inc.

- SCSD. 2007. *Standards for Conscious Sedation in Dentistry: Alternative Techniques: A Report from the Standing Committee on Sedation for Dentistry.*
- SDAC. 2002. *Guidelines for Conscious Sedation in the Provision of Dental Care: A Consultation Paper from the Standing Dental Advisory Committee issued by the Department of Health.* Department of Health.
- SDAC. 2003. *Conscious Sedation in the Provision of Dental Care: Report of an Expert Group on Sedation for Dentistry.* Department of Health.
- Seale, C. 2004. *Researching Society and Culture.* 2nd ed. London SAGE Publications Ltd.
- Segall, A. 1976. The Sick Role Concept: Understanding Illness Behavior. *Journal of Health and Social Behavior* 17(2), pp. 162-169.
- Seligman, M. E. P. and Maier, S. F. 1967. Failure to escape traumatic shock. *Journal of Experimental Psychology* 74(1), pp. 1-9.
- Semple, S. J., Grant, I. and Patterson, T. L. 2005. Utilization of Drug Treatment Programs by Methamphetamine Users: The Role of Social Stigma. *The American Journal on Addictions* 14(4), pp. 367-380.
- Seward, M. 1998. GA- end of an era. *British Dental Journal* 185(10), p. 497.
- Shakespeare, W. 1623 [2005]. As You Like It. In: Wells, S.W. and Taylor, G. (Eds.) *The Complete Works.* Oxford: Oxford University Press, p. 666.
- Sharpe, G., Durham, J. A. and Preshaw, P. M. 2007. Attitudes regarding specialist referrals in periodontics. *British Dental Journal* 202(4), E11.
- Shaw, A. 2002. "It just goes against the grain." Public understandings of genetically modified (GM) food in the UK. *Public Understanding of Science* 11(3), pp. 273-291.
- Shearer, J., Wilson, K. E. and Girdler, N. M. 2004. A survey of the opinions of consultant anaesthetists in Scotland of sedation carried out by dentists. *British Dental Journal* 196(2), pp. 93-98; discussion 88.
- Shibutani, T. 1955. Reference groups as perspectives. *American Journal of Sociology* 60(6), pp. 562-568.
- Shields, R. 1991. *Places on the Margin: Alternative Geographies of Modernity.* London: Routledge.
- Shin, K. R., Kim, M. Y. and Chung, S. E. 2009. Methods and Strategies Utilized in Published Qualitative Research. *Qualitative Health Research* 19(6), pp. 850-858.
- Shostak, S. 2005. The Emergence of Toxicogenomics: A Case Study of Molecularization. *Social Studies of Science* 35(3), pp. 367-403.

- Shuy, R. W. 2002. In-Person versus Telephone Interviewing. *In: Gubrium, J.F. and Holstein, J.A. (Eds.) Handbook of Interview Research: Context and Method.* Thousand Oaks: SAGE Publications Inc., pp. 537-556.
- Silverman, D. 1984. Going Private: Ceremonial Forms in a Private Oncology Clinic. *Sociology* 18(2), pp. 191-204.
- Silverman, D. 2005. *Doing Qualitative Research.* 2nd ed. London: SAGE.
- Silverman, D. 2010. *Doing Qualitative Research.* 3rd ed. London: SAGE.
- Sinclair, S. 1997. *Making Doctors.* Oxford: BERG.
- Sismondo, S. 2004. *An Introduction to Science and Technology Studies.* Oxford: Blackwell Publishing Ltd.
- Skaret, E., Raadal, M., Berg, E. and Kvale, G. 1998. Dental anxiety among 18-year olds in Norway. Prevalence and related factors. *European Journal of Oral Sciences* 106(4), pp. 835-843.
- Smith, P. 1992. *The Emotional Labour of Nursing.* London: Macmillan.
- Smith, P. 1998. The emotional labour of nursing: its impact on interpersonal relations, management and the educational environment in nursing. *In: Mackay, L., Soothill, K. and Melia, K. M. (Eds.) Classic texts in health care By* Oxford UK: Butterworth-Heinemann Ltd., pp. 226-231.
- Soheilipour, S., Scambler, S., Dickinson, C., Dunne, S. M., Burke, M., Jabbarifar, S. E. and Newton, J. T. 2011a. Antibiotic prophylaxis in dentistry: part I. A qualitative study of professionals' views on the NICE guideline. *British Dental Journal* 211(1), E1.
- Soheilipour, S., Scambler, S., Dickinson, C., Dunne, S. M., Burke, M., Jabbarifar, S. E. and Newton, J. T. 2011b. Antibiotic prophylaxis in dentistry: part II. A qualitative study of patient perspectives and understanding of the NICE guideline. *British Dental Journal* 211(1), E2.
- Sondell, K. and Söderfeldt, B. 1997. Dentist-patient communication: a review of relevant models. *Acta Odontologica Scandinavica* 55(2), pp. 116-126.
- Speirs, A. F., Taylor, K. H., Joanes, D. N. and Girdler, N.M. 2001. A randomised, double-blind, placebo-controlled, comparative study of topical skin analgesics and the anxiety and discomfort associated with venous cannulation. *British Dental Journal* 190, pp. 444-449.
- Spigel, L. 1997. From Theatre to Space ship: Metaphors of Suburban domesticity in Postwar America. *In: Silverstone, R. (Ed.) Visions of Suburbia.* London, New York: Routledge, pp. 217-239.
- Spradley, J. P. 1979. *The Ethnographic Interview.* New York: Holt, Rinehart and Winston, Inc.
- Stabile, S. M. 2004. *Memory's daughters: the maternal culture of remembrance in eighteenth-century America.* New York: Cornell University Press.

- Stalker, C. A., Russell, B. D., Teram, E. and Schachter, C. L. 2005. Providing dental care to survivors of childhood sexual abuse: treatment considerations for the practitioner. *Journal of the American Dental Association* 136(9), pp. 1277-1281.
- Star, S. L. 1989a. Layered space, formal representations and long-distance control: the politics of information. *Fundamenta Scientiae* 10(2), pp. 125-154.
- Star, S. L. 1989b. The structure of ill-structured solutions: boundary objects and heterogeneous distributed problem solving. In: Bond, A. and Gasser, L. (Eds.) *Readings in Distributed Artificial Intelligence*. Menlo Park, CA: Morgan Kaufman.
- Star, S. L. 1992. Craft vs. Commodity, Mess vs. Transcendence: How the Right Tool Became the Wrong One in the Case of Taxidermy and Natural History. In: Clarke, A.E. and Fujimura, J.H. (Eds.) *The Right Tools for the Job: At Work in Twentieth Century Life Sciences*. Princeton, New Jersey: Princeton University Press, pp. 257-286.
- Star, S. L. and Greisemer, J. R. 1989. Institutional Ecology, 'Translations' and Boundary objects: Amateurs and Professionals in Berkeley's Museum of Vertebrate Zoology, 1907-39. *Social Studies of Science* 19(3), pp. 387-420.
- Steingarten, J. 2002. *It Must've Been Something I Ate: The Return of the Man Who Ate Everything*. *Headline Review*.
- Stephens, N. 2007. Collecting data from elites and ultra elites: telephone and face-to-face interviews with macroeconomists. *Qualitative Research* 7(2), pp. 203-216.
- Stern, D. T. and Caldicott, C. V. 1999. Turfing: Patients in the Balance. *Journal of General Internal Medicine* 14(4), pp. 243-248.
- Straus, R. 1957. The nature and status of medical sociology. *American Sociological Review* 22(2), pp. 200-204.
- Strauss, A. 1978a. *Negotiations: Varieties, Contexts, Processes, and Social Order*. San Francisco, London: Josey-Bass, Inc.
- Strauss, A. 1978b. A social world perspective. In: Denzin, N.K. (Ed.) *Studies in Symbolic Interaction: A Research Annual*. Vol. 1. Greenwich, London: JAI Press Inc., pp. 119-128.
- Strauss, A. 1982. Social worlds and legitimation processes. In: Denzin, N.K. (Ed.) *Studies in Symbolic Interaction: A Research Annual*. Vol. 4. Greenwich, London: JAI Press Inc., pp. 170-190.
- Strauss, A. 1984. Social worlds and their segmentation pp123-135. In: Denzin, N.K. (Ed.) *Studies in Symbolic Interaction: A Research Annual*. Vol. 5. Greenwich, London: JAI Press Inc., pp. 123-135.
- Strauss, A. 1988. The Articulation of Project Work: An Organizational Process. *The Sociological Quarterly* 29(2), pp. 163-178.
- Strauss, A. 1993. *Continual Permutations of Action*. New York: Aldine de Gruyter.

- Strauss, A. and Corbin, J. 1990. *Basics of Qualitative Research: Techniques and Procedures for Developing Grounded Theory*. Thousand Oaks: SAGE Publications Inc.
- Strauss, A. and Corbin, J. 1998. *Basics of Qualitative Research: Techniques and Procedures for Developing Grounded Theory*. Thousand Oaks: SAGE Publications Inc.
- Strauss, A., Fagerhaugh, S., Suczek, B. and Wiener, C. 1982. Sentimental work in the technologized hospital. *Sociology of Health and Illness* 4(3), pp. 254-278.
- Strauss, A., Fagerhaugh, S., Suczek, B. and Wiener, C. 1985 [1997]. *Social Organization of Medical Work*. New Brunswick: Transaction Publishers.
- Strickler, J. 1992. The new reproductive technology: problem or solution? *Sociology of Health & Illness* 14(1), pp. 111-132.
- Strong, P. M. 1979. *The Ceremonial Order of the Clinic: Parents, Doctors and Medical Bureaucracies*. London: Routledge.
- Strong, P. M. and Dingwall, R. 2001. *The Ceremonial Order of the Clinic: Parents, Doctors and Medical Bureaucracies*. Aldershot: Ashgate.
- Strunin, L. 2007. Intravenous conscious sedation for dental treatment: am I my brother's keeper? [Editorial]. *Anaesthesia* 62(7), pp. 645-647.
- Stryker, S. and Macke, A. S. 1978. Status Inconsistency and Role Conflict. *Annual Review of Sociology* 4, pp. 57-90.
- Sweet, M. 2002. *Inventing the Victorians*. London: Faber and Faber.
- Tait, M. 1997. Dependence: A means or an impediment to growth? *British Journal of Guidance & Counselling* 25(1), pp. 17-26.
- te Brake, H., Bloemendal, E. and Hoogstraten, J. 2003. Gender differences in burnout among Dutch dentists. *Community Dentistry and Oral Epidemiology* 31(5), pp. 321-327.
- The Guardian. 2001. Main findings of the Redfern report. *The Guardian*. Wednesday 31 January 2001.
- The Royal College of Surgeons of England. 1993. *Guidelines for sedation by non-anaesthetists. Report of a Commission on the provision of Surgical Services Working Party*. London: Royal College of Surgeons of England.
- The Royal College of Surgeons of England. 1996. *Report of the Joint Faculties Working Party on Sedation*. London: Royal College of Surgeons of England.
- Thom, A., Sartory, G. and Jhren, P. 2000. Comparison between one-session psychological treatment and benzodiazepine in dental phobia. *Journal of Consulting Clinical Psychology* 68(3), pp. 378-387.
- Thomas, W. I. and Thomas, D. 1928. *The Child in America*. New York: Alfred A. Knopf.

- Thomassen, B. 2009. The Uses and Meanings of Liminality. *International Political Anthropology* 2(1), pp. 5-28.
- Thompson, J. M., Neave, N., Moss, M. C., Scholey, A. B., Wesnes, K. and Girdler, N. M. 1999. Cognitive properties of sedation agents: comparison of the effects of nitrous oxide and midazolam on memory and mood. *British Dental Journal* 187(10), pp. 557-562.
- Thomson, W. B., Broadbent, J. M., Locker, D. and Poulton, R. 2009. Trajectories of dental anxiety in a birth cohort. *Community Dentistry and Oral Epidemiology* 37(3), pp. 209-219.
- Timmermans, S. and Tanner, J. 2004. A disputed occupational boundary: operating theatre nurses and operating department practitioners. *Sociology of Health & Illness* 26(5), pp. 645-666.
- Totterdell, P. and Parkinson, B. 1999. Use and effectiveness of self-regulation strategies for improving mood in a group of trainee teachers. *Journal of Occupational Health Psychology* 4(3), pp. 219-232.
- Tovey, P. and Adams, J. 2001. Primary care as intersecting social worlds. *Social Science & Medicine* 52(5), pp. 695-706.
- Tribbia, J. and Moser, S. C. 2008. More than information: what coastal managers need to plan for climate change. *Journal of Environmental Science and Policy* 11(4), pp. 315-328.
- Trollope, A. 1867 [2004]. *The Last Chronicle of Barset*. Whitefish, MT: Kessinger Publishing Co.
- Trompette, P. and Vinck, D. 2009. Revisiting the notion of Boundary Object. *Revue d'anthropologie des connaissances* 3(1), pp. 3-25.
- Trubshaw, B. 1995 [2008]. *The metaphors and rituals of place and time - an introduction to liminality (or Why Christopher Robin wouldn't walk on the cracks)* [Online]. Available at: <http://www.indigogroup.co.uk/edge/liminal.htm> [Accessed: 20th January 2010 2010].
- Turner, V. 1974. *Dramas, Fields, and Metaphors : Symbolic Action in Human Society*. Ithaca: Cornell University Press.
- Turner, V. W. 1964. An Ndembu doctor in practice. In: Kiev, A. (Ed.) *Magic, faith, and healing: studies in primitive psychiatry today*. New York: Free Press, pp. 260-263.
- Turner, V. W. 1967. *The Forest of Symbols : Aspects of Ndembu Ritual*. Ithaca, NY, London: Cornell University Press.
- Turner, V. W. 1969 [1995]. *The Ritual Process: Structure and Anti-Structure*. New York: Aldine de Gruyter.
- Turner, V. W. 1977. Variations on a Theme of Liminality. In: Moore, S.F. and Myerhoff, B.G. (Eds.) *Secular Ritual*. Amsterdam: Van Gorcum, pp. 36-52.

- Turner, V. W. 1979. Frame, flow and reflection: Ritual and drama as public liminality. *Japanese Journal of Religious Studies* 6(4), pp. 465-499.
- Turner, V. W. 1982. Liminal to Liminoid, in Play, Flow, Ritual: An Essay in Comparative Symbolology. *From Ritual to Theatre: The Human Seriousness of Play*. New York: PAJ Publications.
- UDH. 2007. Patient Referral Protocol. [Online]. Cardiff and Vale NHS Trust. Available at:
http://www.cardiffandvale.wales.nhs.uk/pls/portal/docs/PAGE/INTERNET_HOME_PAGE/SERVICES/DENTAL_HOSPITAL/SPECIALITY/REFERRAL%20PROTOCOL%20DOC%20V3%20%283%29%20FINAL%20DRAFT.PDF.
- UK Academy of Medical Royal Colleges and Faculties. 2001. *Report of an intercollegiate working party chaired by the Royal College of Anaesthetists. Implementing and ensuring safe sedation practice for healthcare procedures in adults*.
- Ustun, Y., Gunduz, M., Erdogan, O. and Benlidayi, M. E. 2006. Dexmedetomidine versus midazolam in outpatient third molar surgery. *Journal of Oral and Maxillofacial Surgery* 64(9), pp. 1353-1358.
- van Gennep, A. 1908 [1960]. *The Rites of Passage [Les rites de passage]* Chicago: University of Chicago Press.
- van Rijswoud, E. 2010. Virology Experts in the Boundary Zone Between Science, Policy and the Public: A Biographical Analysis. *Minerva* 48(2), pp. 145-167.
- Vassend, O. 1993. Anxiety, pain and discomfort associated with dental treatment. *Behaviour Research and Therapy* 31(7), pp. 659-666.
- Wallace, A. D. 2006. Outcomes of patients referred to the Sedation Suite, School of Dentistry, Wales College of Medicine, Cardiff University. *SAAD Digest* 22, pp. 3-10.
- Wallace, J. E. and Lemaire, J. 2007. On physician well being-You'll get by with a little help from your friends. *Social Science & Medicine* 64(12), pp. 2565-2577.
- Warner, J. and Gabe, J. 2004. Risk and liminality in mental health social work. *Health Risk & Society* 6(4), pp. 387-399.
- Watt, I., Nettleton, S. and Burrows, R. 2008. The views of doctors on their working lives: a qualitative study. *Journal of the Royal Society of Medicine* 101(12), pp. 592-597.
- Whiston, S., Prendergast, M. J. and Williams, S. A. 1998. Sedation in primary dental care: an investigation in two districts of northern England. *British Dental Journal* 184(8), pp. 390-393.
- Whittle, J. G. 2000. The provision of primary care dental general anaesthesia and sedation in the north west region of England, 1996-1999. *British Dental Journal* 189(9), pp. 500-502.

- WHO. 2007. *ICD 10* [Online]. World Health Organisation. Available at: <http://apps.who.int/classifications/apps/icd/icd10online/?gz70.htm+z730> [Accessed: 03/03/2011].
- WHO. 2012. *Definition of Health* [Online]. World Health Organisation. Available at: <http://www.who.int/about/definition/en/print.html> [Accessed: 13/03/2012].
- Wilensky, H. 1967. *Organizational Intelligence: Knowledge and Policy in Government and Industry*. New York & London: Basic Books Inc.
- Wilks, G. W. 1999. Anxiety, phobias and sedation [letter]. *British Dental Journal* 187(2), p. 66.
- Willey, D. 2009. Vatican tries to woo back the art world *BBC* [Online]. Available at: <http://news.bbc.co.uk/1/hi/8370683.stm> [Accessed: 06/10/11].
- Williams, C. A. 1989. Empathy and burnout in male and female helping professionals. *Research in Nursing & Health* 12(4), pp. 169-178.
- Willumsen, T., Vassend, O. and Hoffart, A. 2001. A comparison of cognitive therapy, applied relaxation, and nitrous oxide sedation in the treatment of dental fear. *Acta Odontologica Scandinavica* 59(5), pp. 290-296.
- Wilson, K., Bateman, P. and Tomlinson, C. 2002. Referrals to a secondary care dental clinic. *British Dental Journal* 192(8), pp. 424-425.
- Wilson, P. H., Boyle, C. A. and Smith, B. J. 2006. Conscious sedation training received by specialist registrars in restorative dentistry in the UK: a survey. *British Dental Journal* 201(6), pp. 373 - 377.
- Wilson, R. F., Coward, P. Y., Capewell, J., Laidler, T. L., Rigby, A. C. and Shaw, T. J. 1998. Perceived sources of occupational stress in general dental practitioners. *British Dental Journal* 184(10), pp. 499-502.
- Wisløff, T. F., Vassend, O. and Asmyhr, O. 1995. Dental anxiety, utilisation of dental services, and DMFS status in Norwegian military recruits. *Community Dental Health* 12(2), pp. 100-103.
- Wood, D., Bruner, J. S. and Ross, G. 1976. The Role of Tutoring in Problem Solving. *Journal of Child Psychology and Psychiatry* 17(2), pp. 89-100.
- Woodmansey, K. F. 2005. The prevalence of dental anxiety in patients of a university dental clinic. *Journal of American College Health* 54(1), pp. 59-61.
- Woolley, S. M. 2006. Hypnosis– Alternative or Complimentary to Sedation in Dentistry? A Review. *Journal of Disability and Oral Health* 7(3), pp. 156-162.
- Woolley, S. M. 2009. An Audit of Referrals to a Secondary Care Sedation Unit. *British Dental Journal* 206(5), E10; discussion 270-271.
- Wright, D. and Batchelor, P. A. 2002. General dental practitioners' beliefs on the perceived effects of and their preferences for remuneration mechanisms. *British Dental Journal* 192(1), pp. 46-49.

- Wylie, W. D. 1981. The Wylie Report: Report of the Working Party on Training in Dental Anaesthesia. *British Dental Journal* 151(11), pp. 385-388.
- Yang, F.-H. and Chang, C.-C. 2008. Emotional labour, job satisfaction and organizational commitment amongst clinical nurses: A questionnaire survey. *International Journal of Nursing Studies* 45(6), pp. 879-887.
- Yee, N. and Bailenson, J. 2007. The Proteus Effect: The Effect of Transformed Self-Representation on Behavior. *Human Communication Research* 33(3), pp. 271-290.
- Zerubavel, E. 1979. *Patterns of time in hospital life : a sociological perspective*. Chicago: University of Chicago Press.