GOING BEYOND CRAFT CONSUMPTION: OPPORTUNITIES FROM ADDITIVE MANUFACTURING

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Abstract
Purpose of this paper:
Within the literature, many authors have identified that there is an increasing blurring of the distinction between production and consumption, a concept sometimes termed prosumption. The growth in digital technologies has only further accelerated this process (Fox 2017). Within the scope of this broad concept lies craft consumption (Campbell 2005), where items are designed and manufactured by the same person.

The use of additive manufacturing in a domestic environment is, to some extent, another technology that can enable craft consumption. However, while craft consumption focuses on the final consumer carrying out production activities, there is some evidence of a migration towards craft retailing by such individuals.

The aim of the paper is to explore these phenomena in more detail, and particularly considering how technology is supporting the operational processes that occur with this migration. To provide some context, we consider model making as an exemplar craft based industry. Hobbies are often a particular outlet for craft consumption, and model making is no exception (Yarwood and Shaw 2010). Additive manufacturing is also beginning to feature, yet less so amongst large scale manufacturers.

Design/methodology/approach:
The paper is largely based on a narrative review of the literature, particular in the areas of prosumerism and craft consumption. In doing so, the work attempts to bridge the marketing-operations interface. To provide the model making context, we draw on eight interviews. Interviewees included retailers, manufacturers of AM components and consultants, with a particular emphasis on small and micro sized organisations involved in model making related activities.

Findings:
The findings from the research suggest there are a number of paths that individuals follow when extending from craft consumption including 'craft retailers', where the individual manufactures and retails objects, and 'craft makers', who operate on a more make-to-order basis. We characterise these routes and identifying barriers and enablers across the whole 3D printing process (design, pre-processing, manufacture and post-processing), and consider how these supply chains contribute to our understanding of the 3D printing marketplace.

Value:
A recent review of additive manufacturing scenarios (Ryan et al. 2017) identified a number of 'white spaces' for research, including craft businesses. Therefore, this work provides a framework for examining this area in more detail. Further, much of the discussion around prosumption and craft consumption is in the consumer behaviour literature and therefore we provide an extension into operations and supply chain management.

Research limitations/implications (if applicable):
The paper is largely conceptual in nature, with the intention of prompting future research activities in this area. The opportunities include the examination of different business models,

evaluating the motivations of individuals to migrate from craft consumption to craft retailing and considering the design of processes within these small and micro organisations.

References:

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