Original research article

"We can't be too saintly": Why members of parliament in the United Kingdom are reluctant to lead by example with low-carbon behaviour

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ABSTRACT

Low-carbon behaviour change from individuals is both essential for meeting climate change targets and highly politically contentious. Shifting away from activities such as flying, driving and meat eating can greatly reduce greenhouse gas emissions, yet political leaders have avoided introducing policies to stimulate this for fear of alienating voters and confronting political orthodoxies. This article examines low-carbon behaviour change through the novel lens of individual leadership and leading by example. Applying threories of credibility enhancing displays (CREDs) and embodied leadership, we present evidence from 19 interviews with UK members of parliament (MPs), exploring how they think leading by example may affect their credibility as democratic representatives. We find that MPs believe leading by example is important as a general principle but is problematic when it comes to low-carbon behaviour. While some MPs do deliberately model sustainable behaviours to maintain credibility as climate advocates, they tend to do this quietly for fear of negative reactions from the media, political rivals, and constituents. MPs say modelling low-carbon behaviour may be perceived as a threat to individual freedoms, such as flying for holidays, and risks disapproval from local business interests related to high-carbon activities, such as car manufacturers or the airline industry. Even pro-climate MPs tend to frame low-carbon behaviour as "extreme", and position themselves in contrast to this extreme, thus perpetuating social and moral norms of high-carbon behaviour. We discuss how individual politicians form part of a systemic resistance to low-carbon behaviour change.

1. Introduction

Preventing the most damaging effects of climate change will require transformative systemic changes to economies and societies [1]. Moving away from high-carbon activities such as fossil-fuel powered car use, flying, and meat eating has great potential to reduce greenhouse gas emissions in the relative short term [2–9]. Yet the extent to which behaviour change from citizens in wealthy countries to reduce energy demand is necessary, desirable and achievable is one of the most durable and contentious issues within climate politics.

Two historic statements from world leaders help to illustrate the political and moral tension relating to low-carbon behaviour change. In 1990, UK Prime Minister Margaret Thatcher made a case for sacrifice on the basis of intergenerational justice: "The danger of global warming is as yet unseen, but real enough for us to make changes and sacrifices, so that we do not live at the expense of future generations" [10]. US President George H.W. Bush articulated the opposite sentiment at the Rio Earth Summit in 1992, insisting: "The American way of life is not up for negotiation" [11]. In subsequent decades it is Bush's rejection of a moral imperative for lifestyle change and sacrifice that appears to have held sway. In 2021 the then UK Prime Minister Boris Johnson's foreword to the UK's Net Zero Strategy stated: "For years, going green was inextricably bound up with a sense that we have to sacrifice the things we love. But this strategy shows how we can build back greener, without so much as a hair shirt in sight" [12]. The prevailing political view appears to be that low-carbon behaviour change should not be prioritised, such that politicians and governments have generally avoided the issue, instead preferring technological "supply-side" solutions [6,13,30].

Technological solutions are undoubtedly needed, but the UK's Climate Change Committee (CCC) has calculated that 62% of the nation's emissions reductions will require behaviour changes [14]. Other analysis has calculated that 32% of UK emissions reductions will rely entirely on individual and household-level decisions [15]. At a global level, the Intergovernmental Panel on Climate Change (IPCC) has stated

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that reductions in demand for energy, including behaviour changes, have the advantage of helping to avoid the "major risk" of relying on as-yet undeveloped Carbon Dioxide Removal (CDR) technologies [1], without compromising personal wellbeing [8]. Yet, despite the clear advantages of preventing emissions in the first place rather than attempting to reverse emissions in future, there is minimal political focus on reducing demand via behaviour change, a situation described as a "governance trap" [17] or a "dance or partial commitment" from politicians and the public [16], that serves to maintain a "feel-good fallacy" [30] that masks the social and political challenges of climate mitigation. This political reluctance to engage with behaviour change may be related to the fact that carbon footprints vary hugely between individuals and correlate closely with wealth [2,18,19]. This makes efforts to achieve significant low-carbon behaviour change inherently political as questions arise as to who should change, when, and by how much. In reality, such questions are generally absent when low-carbon behaviour change is discussed. Instead a tacit "flat" view of society is adopted, underpinned by the general idea that "everybody will need to change their behaviour at some point".

Concurrent with the absence of behaviour change policies, senior politicians are often seen exhibiting high-carbon behaviour where lower-carbon options are available. In the UK, recent Prime Ministers Boris Johnson, Liz Truss and Rishi Sunak, as well as current Prime Minister Keir Starmer, have received criticism for travelling by helicopter or private jets instead of using commercial airlines or trains [20–23]. Similarly, Rishi Sunak, former UK Foreign Secretary David Cameron, and King Charles raised eyebrows when each took a different private jet to the COP28 climate conference in Dubai. When questioned about this, a government spokesman confirmed its preference for technology over behaviour change: "This government's approach to tackling climate change… is not about banning or reducing people from flying. It is through investing in new technologies of the future." [24].

1.1. The credibility gap

To position our research, we propose that the mismatch between climate scientists' urgent calls for transformative societal change and avoidable high-carbon behaviours from politicians creates a "credibility gap" that may impede public engagement with climate change and deter low-carbon choices. Such credibility gaps have been identified where ambitions national climate targets are not matched by policies to meet the targets [25]. Research has repeatedly confirmed an appetite among the public for clear and consistent leadership from government and its representatives when it comes to climate change [15,17,26–29]. Willis [30] describes public meetings in the UK about climate change attended by ordinary citizens as follows:

> "One overriding feeling emerged from participants: confusion. They couldn't understand why, if it was so serious, government was not taking a lead. They knew that there were things they could do for themselves – like recycling and driving less – but these seemed like insignificant contributions if they were not backed up by a coherent strategy, led by politicians. As one said: 'the Government needs to lead by example – everyone from the top down needs to play their part'."

Similar research has shown that the public view their own responsibility to act on climate change in relation to that of institutions, and want to see institutions fulfilling their duties [27]. Members of parliament (MPs), as representatives of government institutions, may have a role to play in signalling that the government is taking climate change seriously. The credibility gap coincides with historically low levels of trust in politicians and leaders in general, in what has been termed a "crisis of trust" [31–35]. This lack of trust and credibility may diminish politicians' ability to maintain support for the policies and social transformations necessary to address the climate crisis including, but not limited to, policies related to promoting low-carbon behaviours.

Meanwhile reports commissioned by the UK Government have identified the importance of leading by example to promote behaviour change [36–38]. These include a supporting document to the *Net Zero Strategy* quoted above, which was published then hurriedly deleted from the government website [39]. It said: "*Government institutions and high-profile individuals should lead by example and display committed and visible consistency with their own Net Zero narrative*" [38].

Our research explores the credibility gap from a novel perspective by focussing on UK MPs and their views on leading by example with high-impact low-carbon behaviour. Such voluntary example setting has several potential political merits because it: maintains individual freedom of choice; avoids coercive policies; signals the need for behavioural change; and demonstrates committed leadership with the potential to increase trust. Furthermore, MPs may be especially apt candidates to lead by example due to their dual role as legislators responsible for steering the national response to climate change and as personal representatives of their constituents, thus providing an embodied link between climate change, government institutions, and the public. Our study forms part of a wider research project on the efficacy of low-carbon leading by example.

1.2. Theoretical framework

Leading by example is widely accepted as a foundational principle of leadership. This principle requires leaders to model the type of behaviour they expect "followers" to adopt, be it in politics, education, healthcare, sport, the military, and social organisations of all kinds [40]. Conversely, if leaders act in ways that appear to contradict key objectives, values and norms of social organisations, this stands out as incongruous and, sometimes, unacceptable. A high-profile example is that of former UK Prime Minister Boris Johnson, whose premiership was brought down in part by the "Partygate" scandal where Johnson broke Covid regulations that he had legislated, resulting in a terminal loss of credibility. An absence of leading by example and failure to match words with actions is often termed hypocrisy (or false signalling) to which humans are highly averse [41].

1.2.1. Credibility enhancing displays (CREDs)

Leading by example is closely linked to credibility. Definitions of individual credibility vary, but it commonly consists of perceived commitment, trustworthiness, honesty, competence, reliability, knowledge and skill [40,42,43]. The theory of credibility enhancing displays (CREDs) or "costly displays" asserts that taking personal action that is perceived as costly, difficult or involving some kind of sacrifice sends powerful signals about someone's beliefs and commitments, over and above their words [44,45]. For instance sellers of solar panels who have themselves paid for the product to be fitted to their own homes have been shown to be more credible and successful [46]. Furthermore, climate advocates who are seen to have lower-carbon lifestyles have been shown to be more credible and more effective at promoting climate policies [47–49]. In our study we use the theory of credibility enhancing displays to explore if and how MPs link their personal low- or high-carbon behaviour to their credibility on climate change.

1.2.2. Embodied leadership

From a wider perspective, we site the research within an overarching theory of embodied leadership, which centres a leader's physical actions rather than other leadership functions such as organising, speaking, convening, agenda-setting, and decision making [50–52]. Our development of embodied leadership theory posits that a leader's actions in relation to climate change carry meaning for others, and also for the leaders themselves. Leaders such as politicians can be said to embody climate change through their physical responses and choices about low- or high-carbon behaviours. We suggest a "contradiction of leadership" can be perceived when a leader's message about the urgency of reducing emissions coincides with avoidable high-carbon behavioural choices.

Notwithstanding this, the work of political leaders may involve high-carbon activities that are deemed hard to avoid, such as regular long-distance travel or maintaining an image of status and power. Even if they wanted to change, politicians are subject to "system-protection tendencies" that restrict their ability to challenge social and structural norms [53]. As such, embodying climate change through the adoption of low-carbon behaviour may not be a simple matter of choice.

1.2.3. Power

We also explore MPs' actions, and their potential effects on others, through the lens of power. Leaders, including politicians, are likely to reside in social strata with the highest lifestyle emissions, while arguably having more agency to adjust their lifestyles, and having more power to bring about change or maintain the status quo [54,55]. Power is a contested term of course. With a view to providing a workable framework, Avelino [56] proposes three types of power in the context of social change and innovation: *reinforcive* power, *innovative* power and *transformative* power. Reinforcive power "is the capacity to reinforce and reproduce existing structures and institutions", and Avelino highlights the agency of individuals to use this kind of power. Innovative power is "the capacity to create new resources", such as electric vehicles and charging technology that will influence people's lives. Transformative power is the capacity to change social structures and institutions or, in the case of the present research, social norms [56,57]. Taking Avelino's three classifications in relation to the current research, the behaviours of leaders can be assessed according to whether they tend to **reinforce** or to **transform** current structures and norms of low- or high-carbon behaviour.

We also consider Steven Lukes' three dimensions of political power, which range from the activities of powerful parties working to further their interests, to more subtle and unseen manifestations of power [58]. The first of Lukes' dimensions involves overt and observable behaviour (by individuals or collectives) that influences outcomes to favour certain parties over others. The second dimension involves less visible manifestations of power, such as: *non*-decision making that serves the interests of certain parties; conflicts which are not overt, thus making the workings of power less obvious; and conflicts that are avoided altogether by, for instance, ensuring that certain contestable subjects and issues are not raised at all. In the context of the current research, the absence in climate discourse and policy of a focus on the large differences between individuals' emissions, thus avoiding the potential for constraints on those whose lifestyles create the most emissions, could be viewed as a manifestation of the second dimension of power. The third dimension of power according to Lukes adds more subtle exercises of power that are harder to identify. Primarily this dimension involves the shaping of people's preferences and consciousness such that they go along with certain societal conditions and do not contest decisions because it doesn't even occur to them to do so. This dimension has clear synergies with Gramsci's ideas of power residing in ideologies, such that citizens comply with certain ways of being and behavioural norms because this is experienced as the natural order [59]. The societal acceptance of unlimited freedom to consume despite its damaging effects, and the stigmatisation of some pro-environmental behaviours [60], could be considered an effect of preference-shaping power.

1.2.4. Identity

Social identity theory provides evidence that leadership is intimately related to the identity of followers, such that effective leaders must understand and work with followers' group identity, be it at national, organisational, club or even friendship level [61,62]. Haslam and colleagues suggest leaders must not only tap into followers' identity, but also shape it through "identity entrepreneurship". Leaders aren't always obliged to act in the direct interest of followers, but they must be seen as "*doing it for us*" when they take action that may not seem directly beneficial to followers [61] (p114). Central to the social identity theory of leadership is evidence that successful leaders tend to be prototypical

of the group they are leading [61,63], particularly when the prototype is defined in aspirational terms [62]. In other words the prototypical leader possesses and expresses qualities that group members identify with and aspire to – such that group members feel that the leader is *like them* and represents the best qualities of the group [61,62]. This sense of prototypicality may be easier to achieve in smaller or well-defined institutional settings such as companies or the armed forces, for example, rather than in wider society where political leaders operate. Identity leadership also involves the *performance* of leading, and that performance can involve sacrifice, as the high-profile examples of Gandhi and Martin Luther King exemplify [61].

Other scholars agree that a leader's actions must walk a fine line between shaping group identity and conforming to it [50]. This suggests that, while identity provides a potentially powerful lever to promote pro-environmental behaviour through leadership, group identity may limit the actions leaders can exhibit while still representing a group. Furthermore, group identity as a mechanism by which leading by example may be effective also encounters a potential backfire effect for those who do not identify with a particular group or leader. This potential for polarisation in response to a leader modelling low-carbon behaviour stems from "*the inherent tendency towards social differentiation and intergroup conflict*" causing "*cultural protest*" whereby some may follow the leader's example and others will likely rebel against it, with the polarising effect exacerbated in highly stratified societies [65] (p83).

Importantly, politicians themselves reside within social groups where identities are powerful drivers. Research on European politicians found the maintenance of social identity relating to formal or informal allegiances, for instance party or national identities, can have a strong influence on politicians' positions on climate issues and their corresponding actions [65]. In the UK, MPs have shown a reluctance to talk too vehemently about the threats of climate change for fear of being socially excluded by colleagues in Parliament, harming their career prospects, or being labelled a "freak" or a "zealot" by their peers [66]. They have also tended to "tame" climate change by avoiding language that connects its causes or likely impact to people and communities [67], and adopted "stealth strategies" to promote climate-friendly policies without overt reference to climate change itself [30].

1.2.5. Morality and judging others

Leading by example involves overt behaviour that is observed and appraised by others, with the potential to inspire emulation. However, interpersonal judgement is complex, and positive responses to seemingly "good" behaviour are far from guaranteed. People may perceive a moral or social threat from altruistic behaviour that makes them look or feel bad in comparison [68]. Or they may object to an MP's low-carbon behaviour if they believe it points towards a future where a behaviour they currently enjoy, such as flying or meat eating, is less acceptable. Such responses to altruistic behaviour can lead to processes of "do-gooder derogation" whereby the underlying motivations or effectiveness of the behaviour are derided in order to maintain the observers' positive moral self-image [69]. Accusations of pro-environmental "virtue signalling" can be seen in this light. The perceived motivations of someone adopting altruistic behaviour are often key to observers' positive or negative responses. If self-interested or self-aggrandising motivations are suspected, even a seemingly positive behaviour may be viewed badly [68]. This is an important consideration when it comes to credibility enhancing displays.

Against this theoretical backdrop, we designed our interviews to address the following **research questions**: How do MPs view their obligations to lead by example in principle and in practice when it comes to low-carbon behaviour? Do they think this behaviour is desirable, possible, and what effect might it have? How would it affect their credibility as leaders? Could MPs embody climate change via low-carbon behaviour?

2. Methods

In view of the potential challenges involved in recruiting elites, opportunity sampling was adopted, with all 650 sitting UK MPs invited by email to be interviewed. Of these, 24 replied expressing interest, which led to 19 successful interviews and five cancellations due to diary limitations. The interviews therefore reflect a self-selecting group of MPs from five political parties: Conservative 5; Labour 10; Liberal Democrat 1; Plaid Cymru 1; DUP 2; with a gender split of 16 male and 3 female. The percentage of female MPs interviewed (16%) is considerably lower than the 35% gender split in parliament at the time (208/650). The MPs were given a detailed explanation in advance of the research project and the subject of the interview, under the heading of "leading by example and climate change". The MPs' stance on climate change was not an explicit subject of the interviews, but 16 of the MPs seemed broadly supportive of societal action on climate change, two were more sceptical of how climate change is being tackled in the UK, and one did not believe humans were contributing to climate change. The opportunity sample of MPs cannot claim to be representative. For instance the MPs who took part may have been especially in favour of, or against, climate action, or particularly interested in personal climate leadership. That said, a broad range of views were expressed by MPs with different political affiliations.

An interview schedule was used as a guide rather than a strict format for the semi-structured interviews, allowing flexibility to ask follow-up questions and to facilitate the flow of the interviews. MPs were asked about their views on leadership in general, whether they thought of themselves as role models, and their views about adopting visible high-impact low-carbon behaviours such as flying less, eating less meat, improving home energy efficiency, driving less or active travel. Where appropriate the wording of the questions was adhered to, to provide consistent stimulus to the MPs. The interviews were carried out between August and October 2019. This period was particularly politically tumultuous in the UK, with Brexit negotiations and Boris Johnson recently installed as the new Prime Minister (23 July) ahead of a General Election on 12 December 2019. 18 MPs were interviewed verbally (14 by phone, 4 in person), and one MP sent a statement via email in response to the research questions. The MPs had differing time available. The longest interview lasted 64 minutes, the shortest 10 minutes, and the mean length was 27 minutes. Interviewees consented that direct quotes could be used, while protecting anonymity. The quotes included in this article are verbatim, but details that might identify MPs have been omitted, including gender identifiers and constituency references.

The interviews were transcribed by the lead author and a Thematic Analysis process undertaken [70]. The related theories of credibility enhancing displays and embodied leadership guided the analysis and development of themes. This involved analysing how MPs discussed how their behaviours may affect others' perceptions of their credibility, trustworthiness, honesty, and competence. In addition, attention was paid to how MPs talked about their own actions in relation to the idea of embodiment, exploring how their behavioural responses to climate change were deemed relevant to the issue, and to their leadership position. **Credibility** and **embodiment** were therefore overarching a-priori themes. Another a-priori theme focused on MPs' views on **leading by example and acting as role models**, which was an explicit focus of the interview questions. Other themes were developed during analysis based on commonalities and divergences in the ways MPs spoke about individual behaviour and leading by example. These "emergent" themes were: **hypocrisy and reputation**; **representing constituents**; and the **non-normality of low-carbon action**. The first two of these were developed in direct response to the most salient issues raised by the MPs when they considered their own behaviour and how it might be perceived. Avoiding perceptions of hypocrisy and reputational damage were high on the MPs' agenda, and they very often justified their positions on individual behaviour in relation to the interests of their constituents. The non-normality of low-carbon action as a theme was

developed in response to a common pattern of language used by MPs to depict low-carbon action as "extreme". Considering most of the MPs we interviewed were supportive of action on climate change, this theme constitutes a novel contribution to understandings of how politicians frame the issue of low-carbon behaviour change, and is perhaps instructive as to why low-carbon behaviour change policies remain politically taboo.

3. Results

We first present evidence of how MPs conceive of leading by example in principle and in practice when it comes to low-carbon behaviour.

3.1. Leading by example and acting as role models

Most of the MPs said that leading by example was important as a general principle of leadership to achieve consistency between words and actions, and to maintain trust and credibility as leaders. Quotes included, "It's really important that a leader models good behaviour", "I think consistency is important… otherwise you lose trust and your right to authority" and "it's really important to show what good behaviours look like". Some MPs expressed more philosophical views: "I think it was Mahatma Gandhi that said 'be the change that you want to see in the world' and that's how I see things". One MP lamented what they saw as a lack of morality evident in current political leadership.

MPs referred to the temporal and physical aspects of leading by example in the shape of leaders acting first ("you should do what it is you would expect the general population to do in the future"), and not getting too far ahead of those they are leading ("[a leader needs to be] ahead of the curve and not outside the curve").

When asked about low-carbon behaviour specifically, several MPs were in favour of leading by example in this way, however only two MPs said that they deliberately publicised their low-carbon behaviours.

> "[I went public] because I think it's important that we move as rapidly as we can towards a carbon-free world where we generate all our energy with renewables, and I want to play my part in that, but also let everybody know that's what I do too."

More commonly, MPs framed their low-carbon actions in more defensive terms, in the sense that they were seeking to avoid the appearance of contradictory behaviour, rather than setting an example for others to follow:

> "you… shouldn't be in a situation where you are saying [people need to move to low-carbon behaviour] and then doing the opposite in your daily life and expecting people then to believe what you're saying."

MPs expressed differing views on their status as leaders and role models. When asked, "As an MP, do you see yourself as a role model?" one answered:

> "Unfortunately yes. Members of parliament are particularly open to charges of hypocrisy, which I understand, so I try to… if I say that I think we should be more sustainable, use more renewable sources of power, I try [to] waste less food, choose organic, I try to do that, not always successfully."

Another MP pointed directly to contradictions between politicians' message on climate change and their actions:

> "You've got some politicians that are saying 'Yes we'll deal with climate change, we'll deal with the environment,' but the reality is their actions don't follow their thoughts … I think that's a failure of lots of politicians across the divide. … That isn't leadership. Leadership is saying 'I've done these things myself' so if someone says to you 'well what have you done?', you say 'well actually I've done this, this and this'."

These quotes illustrate that some MPs believe leading by example is important to maintain credibility and trust when making the case for broader climate action. Interestingly the same message was put forward forcefully by two MPs who were more sceptical about the UK's climate targets and policies. One said:

> "I suspect most of the MPs who stand up in Parliament and lecture everybody about all this climate change thing are the ones who take the most flights around the world. That's not leadership is it? That's just irritating."

The interviewee was asked what they would think if an MP said they were going to avoid such flights because of climate change. They responded:

> "Yeah I'd have more respect for them. I mean, I wouldn't necessarily agree with them but I would respect that. I'd say that's fair enough, they're practising what they preach. But far too often in politics in particular people don't practise what they preach, … You can't expect people to do things that you're not prepared to do yourself. … They don't have to go [on work-related flights] – there's no compulsion to go. But they want to go. [They say] 'oh I don't have any choice', but of course they have a choice."

While some MPs emphasized the importance of adopting low-carbon behaviour where possible, most expressed ambivalence about the practicalities of MPs being low-carbon role models and how this would work in practice.

A minority of interviewees, including the two sceptical MPs, were uncomfortable describing themselves as role models and were less assertive about MPs' obligations to adopt low-carbon behaviours. One insisted they were *not* a leader or a role model, instead saying their job was "to represent the interests of my constituents in Parliament." Another described themselves as "part of my community" who "just behave[s] like an ordinary person." This claim to ordinariness indicates an understandable desire on the part of MPs to identify with their constituents, but is not necessarily consistent with MPs being viewed as "the ruling class" by the majority of the public [71]. Later in the interview the same MP said they planned to buy an electric car and create some publicity around it, with a view to inspiring others.

The evidence so far reveals that some MPs link their personal behaviour to their credibility in relation to climate change. The extracts also highlight embodied aspects of leadership in terms of being ahead of followers both physically and temporally. However, the potency of behaviour to send signals comes with reputational risks, as will be explored next.

3.2. Hypocrisy and reputation

Even MPs who were in favour of low-carbon leading by example were highly attuned to the risks to their reputation from anticipated attacks from rivals or the media. One said:

> "It's very easy to slip up and fall with the spotlight on you. You say something and then, as Prince Harry found out last week, everybody will be out to get him, to prove that he's a hypocrite, which he isn't. …it becomes almost impossible. … So the best thing to do is just get on with it, don't make a big fuss, don't boast about doing this, that and the other because somebody will always come along and point out where you're not doing the right thing, so you just do it so that if people do look into your lifestyle then they can say 'ok well, by and large they do try and practise what they preach'."

The low-key approach recommended above was replicated by several other MPs in relation to their low-carbon behaviour, as these quotes exemplify: "I don't like shouting from the rooftops"; "Well I don't go around broadcasting, 'oh look at me I don't [do this high-carbon activity anymore]'"; "If you set out to make great dramatic statements you can be cruising for a bruising."; "I eat very little red meat, but I don't

go around telling everybody that." These statements could be viewed as MPs adopting "stealth strategies" when it comes to their own low-carbon behaviour, in a continuation of the approach mentioned in the introduction [30]. They highlight the importance of how behaviour is communicated and the risks of being perceived as bragging or trying to look good to others [68].

Media and social media were explicitly mentioned by several MPs as a reason to keep relatively quiet about their low-carbon behaviours. A second MP referred to Prince Harry and Meghan Markle, who had recently been in the news following their statements about having "two children, maximum" for environmental reasons, and were immediately criticized as hypocrites for flying in private jets. The MP's conclusion was that:

> "You can't win. So I think often these things are better done at a local, less visible way, out of the sight of the media."

For this MP, a negative media reaction in response to the royal couple is given as a reason for not making bold statements about lower-carbon behaviour. It is notable that these MPs view the criticism of Harry and Meghan taking private jet flights as invalid because "it becomes impossible" and "you can't win", perhaps implying that using private jets is unavoidable. The quotes reveal how these MPs expect their reputation to be damaged and credibility harmed by going public with low-carbon behaviour. Central to this damage appears to be portrayals in the media. The example of Prince Harry and Meghan Markle suggests that for embodied leadership to be effective it cannot happen in only one area of life, for instance limiting family size, while ignoring other highly impactful behaviours, such as private jet use. This need for lifestyle consistency presents a practical challenge for embodied leadership on climate change.

One of the more sceptical MPs also expressed strong aversion to celebrities who advocate for climate action but often travel by plane:

> "They are going off presumably first class, if not a private jet, from one bloody city to another, flying around the place so they can make some cash in order to tell working class families they can't have a cheap holiday in Spain once a year. I mean, absolutely not! I totally fucking reject it to be honest with you."

Notably, the MPs who were sceptical of climate action thought the credibility of climate advocates, including MPs, would be greatly enhanced by embodied leadership in the shape of a shift to low-carbon behaviours. These MPs also used some bold language to object to the use of coercive power to control others' actions, for instance: "tell working class families they can't have a cheap holiday"; "lecture people to do something that they don't do themselves"; "people shouldn't be bullied into doing things they don't want to do". Hyperbolic language was not unique to the sceptical MPs, however, as will be explored further below in Section 3.4.

3.3. Representing constituents

When considering the issue of leading by example, most MPs made reference to their position as constituency representatives and whether such behaviour would gain or lose constituents' approval. This was particularly acute for one interviewee with a small majority. When asked about the idea of signing a "Flight Free" pledge, which commits people to not flying for a year, another MP anticipated a negative reaction from constituents:

> "the people who tend to fly the most are the people with money,… the business people jetting around. If you are saying to constituents like mine who mainly go away once a year, they fly twice, right, they fly to Spain for two weeks and come back the other week. They are going to rail against [it and say] 'Well why are you banning me from flying? …The only treat I get a year is my two weeks in Fuengirola'.

… So I think you've got to be very careful what you talk about [with] symbolic politics, and not leave certain people in society out."

Here we see the MP invoke justice concerns when suggesting it would not be fair to stop those who fly only once a year for a holiday. Notably, the MP discusses how signing the Flight Free pledge might send a signal to only one end of the consumption spectrum (the family that takes only one return flight a year) rather than to "the people who tend to fly the most… the people with money…". Furthermore, the MP's mention of "banning me from flying" calls on a rhetorical device known as an "extreme case formulation" [72]. In this case, the MP implies that the signing a voluntary one-year pledge will be interpreted as a universal ban on flying. This rhetorical device cropped up several times in the interviews in relation to low-carbon behaviour, as expanded on in Section 3.4.

Another MP said their constituents had not explicitly called for them to adopt low-carbon behaviour, implying this made such behaviour unnecessary:

"In all honesty I can't say anyone's ever written to me and said, 'Well I'm not doing anything about climate change because I don't think you're doing anything about climate change as an individual.'"

Another MP said their constituents were far more concerned with job security and financial considerations than individual behaviour relating to climate change. Asked if they would feel free to adopt impactful low-carbon behaviour, two MPs said they would have to consider whether local businesses would approve:

"You know, most people in my patch would applaud the efforts [to act in low-carbon ways]. But at the same time they wouldn't want to see me disrespecting [local manufacturing] industry. … I'm much more interested in pushing [R&D in order] to say 'OK we can decrease our emissions by using this technology.'"

This MP's pivot towards future technological solutions echoes the pro-technology bias and "feel-good fallacy" [30] favoured by politicians, as described in the introduction.

When asked about advocating for low-carbon behaviour, the following MP was supportive in principle and said they tried to reduce their own impact, but raised constituents' interests in the shape of jobs and economic prosperity, in relation to possible airport expansion. Technology was again seen as a source of hope:

"What I'm hoping of course, and there are technological advances being made, which will, it seems, eventually lead us to air travel which is not polluting. We are some way away from that yet but they are seriously thinking about that at the moment."

The MPs quoted above suggest that low-carbon leading by example is not an important part of representing their constituents, and some feel that it goes against their constituents' interests. The quotes point towards the significance for MPs of embodying constituents' interests through their own action – embodiment that, in this case, does not involve low-carbon behaviour.

The communicative potential of visible low-carbon action was cited by two MPs who said it may be perceived as "virtue signalling":

"I think the risk is that some people would say, 'It's fine for you, you're on £77,000 a year, of course you can afford to replace your gas boiler with an electric one. I'm on minimum wage I've got bills, I've got arrears, I can't afford it, so that was all very interesting, you've signalled your virtue.'"

The above extract warns against behaviour that might appear privileged or exclusive. Again, we see an assumption that low-carbon leading by example only sends signals to those on lower incomes, rather than those of equal or greater wealth, and this is used as a reason for not doing it. The following MP went further in criticising virtue signalling:

"In fact the virtue signalling in and of itself is part of the problem. … The most classic one is David Cameron 10 or 15 years ago putting solar panels on his roof. …the truth is that most people can't afford solar panels on their roof, so what are you really saying is 'Look at me, I'm so green.'"

These quotes articulate a presumption that the motives of MPs adopting low-carbon actions will be questioned and likely derided. This presumption may be well-founded considering the low levels of trust enjoyed by politicians and the tendency to question the motives of those exhibiting pro-social behaviour [68].

When considering the reactions of constituents to example-setting, several MPs recommended small steps to avoid alienating constituents, using the logic of "every little helps". Such small steps would have a big effect when added together, MPs said:

"probably the way forward is asking people to take baby steps… you know, even someone turning the light out when they leave the room to save a bit of energy, you know, at least they are becoming aware of those things."

Other MPs mentioned recycling and reducing single-use plastics in Parliament:

"…all those things I think do help nudge in the right direction and therefore are important."

The idea of aggregating small changes has been strongly critiqued by energy experts as insufficient to reduce emissions, famously by former UK Government chief scientific advisor David Mackay who asserted that "every BIG helps", arguing that it was the behaviours that make a big difference that should be the focus of attention [73]. These extracts highlight a propensity among MPs to favour incremental changes that are not disruptive to the status quo, which aligns with Willis' findings about politicians' tendency to "tame" climate change and avoid confronting the idea of major societal disruptions or lifestyle changes [30,67]. It is important to note that several MPs did acknowledge the scale of the challenge of climate change, but none thought behaviour should or could change rapidly. This leads to the final theme of our analysis.

3.4. The non-normality of low-carbon action

When talking about the kind of low-carbon actions they might exhibit, several MPs presented their own position relative to a more radical or extreme behavioural position that they would *not* adopt – a rhetorical technique has been described as an "extreme case formulation" [72]. The following MPs were in favour of climate action and some level of role modelling, but highlighted their tendency to stay within the bounds of what they view as socially normal or moderate behaviour. Bold sections highlight what could be considered extreme case formulations.

"It's a difficult one because …I'm not going to turn into a vegan, [a] person who wears linen and goes around in a teepee or whatever. **I'm going to still be of this world**."

"I think to try to set some sort of example but **not be too saintly**."

"You take people with you on a journey of changing. I think that's a better role model than being out there, **being absolutely fabulous and perfect**."

The statements above paint a picture of radical low-carbon behaviour that is outside of social norms and is other-worldly, perhaps involving self-denial, religious piety, or pejorative ideals of purity and perfection. It may be that the MPs were positioning their own behaviour in contrast to this more radical stance in order tacitly to guard against perceptions of being "freaks" or "zealots" when it comes to climate change, which is an established fear among MPs [66]. However, it might

be considered that MPs' propensity to frame low-carbon behaviour as freakish and outside of social norms may serve to maintain high-carbon norms and prolong the stigma of defying such norms.

We observed a similar pattern where MPs positioned their views on low-carbon behaviour change as moderate and in contrast to a straw man position of immediate and total cessation of high-carbon activities (a position that was not suggested by the interviewer).

> "I'm not going to sit here and say to you 'oh yeah of course **we should stop all that [high-carbon behaviour] and it should all just be resolved tomorrow**' … but I acknowledge you have to find a medium before it's too late, if it isn't too late already."

> "**Getting rid of all flights for the time being is not realistic**, but we've got to look towards a world where we can somehow make air flight not environmentally damaging, and that's difficult."

> "I wouldn't be going out there saying 'yes I'm going to be green and **nobody should buy a car ever again**'"

> "I struggle to be **absolutely purist**"

> "I think the climate change movement, they ask people to become almost like **Trappist monks**."

This language from MPs may reflect a kernel of truth that some narratives in the environmental movement emphasise extremes of behaviour, urgency and rhetoric. However, the reproduction and normalisation of this language in political discourse may serve to perpetuate ideas that low-carbon behaviour is socially "other", thus maintaining high-carbon social norms and prolonging outgroup status for those who do adopt or advocate for low-carbon behaviour. The language may also serve the purpose of maintaining a social identity that MPs perceive matches that of their Parliamentary colleagues or certain of their constituents [65]. Some MPs therefore present credibility as being close to the social norm rather than an "extreme" of low-carbon behaviour. As such, embodied leadership for them is embodying current norms rather than embodying a rapid shift to low-carbon lifestyles.

3.5. Differences between the MPs

There were many synergies between the MPs views on leading by example, and some important areas of divergence. These differences and similarities did not appear to split along party or ideological lines, although the two sceptical MPs, both in the Conservative Party, were strongly against what they perceived as hypocrisy from climate advocates, including their colleagues. A similar but less forthright anti-hypocrisy stance was voiced by a Labour MP who was a strong advocate for climate action. The one MP who did not believe in human-caused climate change was from the DUP. MPs expressed a spectrum of enthusiasm for leading by example with low-carbon action, from those who thought it was important to do overtly, a majority who thought a quiet approach was best, and those who argued against an overemphasis on individual behaviour. Table 1 shows a breakdown of these opinions split by political party.

It is also worth reflecting on the extent to which the MPs were being candid in the interviews. For instance, a perception of being "on the spot" in relation to the tricky topic of low-carbon behaviour, or concerns over anonymity, may have limited some MPs' willingness to express their true opinions. The analysis in this paper should be considered in that light. That said, several MPs volunteered confidential information and reasserted the need for anonymity during the interviews, perhaps indicating a high level of candour. A particular example of this candour is the MP quoted last in Section 3.2 whose language was colourful and tone confrontational, to say the least.

4. Discussion

Our research investigated how UK Members of Parliament engage

Table 1
MPs' views on adopting low-carbon behaviour by party.

	Total (19)	Labour (10)	Tory (5)	DUP (2)	LD (1)	Plaid Cymru (1)
Thinks individual low-carbon action is important	12 (63%)	8 (80%)	2 (40%)	0 (0%)	1 (100%)	1 (100%)
Takes individual low-carbon actions	12 (63%)	7 (70%)	3 (60%)	0 (0%)	1 (100%)	1 (100%)
Publicises their individual low-carbon actions	2 (11%)	1 (10%)	0 (0%)	0 (0%)	1 (100%)	0 (0%)

With a small sample size of 19 MPs, these figures are not intended to be representative of politicians more broadly, but illustrate how certain attitudes and priorities played out in the interviews.

with the subject of low-carbon behaviour change and leading by example, in the context of the need for rapid societal transformations to address climate change [1]. Specifically, we explored whether MPs view low-carbon behaviour as a "credibility enhancing display" (CRED) that could increase public trust in politicians' commitment to climate action. We adopted an overarching perspective of embodied leadership, whereby a leaders' bodily actions carry meaning and send signals to observers, over and above the leaders' words. Most of the MPs we interviewed said that setting an example of appropriate behaviour was an important part of leadership, but they expressed mixed opinions and some serious reservations about whether it was right for them to display low-carbon actions to try to influence others. Several MPs believed their own low-carbon behaviour was essential to their credibility when advocating for action on climate change. Likewise, these MPs said *not* leading by example would diminish their credibility on the issue and leave them open to accusations of hypocrisy. However, most MPs tended to present their leadership role as building coalitions and pressing for systemic change via climate policies and legislation.

Around two-thirds of the 19 MPs we interviewed said they took action to reduce their own climate impact, and two MPs said they did this to set an overt example for others (citing active travel, driving an electric car, or making changes to their home energy system). Most commonly however, MPs framed low-carbon leading by example in *passive*, *retrospective*, or *defensive* terms: *passive* in the sense that their low-carbon behaviour was carried out quietly and intended *not* to trigger a response, rather than to deliberately attract attention and inspire others; *retrospective* in the sense that low carbon behaviour would allow observers to look back at the MP's record of behaviour and see it was consistent with their position on climate change; and *defensive* in the sense that a record of low-carbon action would provide a shield against accusations of hypocrisy. Overall therefore, credibility on climate change is something that is *retained* through ongoing behind-the-scenes leading by example for some MPs, rather than actively *built* by overt displays of low-carbon behaviour. In effect this could be viewed as another "stealth strategy" as described by Willis [30]. A clear message from many MPs was that adopting high-impact low-carbon behaviour to send a deliberate signal was more likely to damage their credibility due to accusations of virtue signalling and perceptions of being "too perfect", rather than to enhance their credibility. As such, they believed overt low-carbon behaviour could be a credibility undermining display (CRUD). None of the MPs said explicitly that personal sacrifice was a necessary part of addressing climate change, and their concerns about remaining faithful to constituents' interests indicated an aversion to personal sacrifices that may be perceived as, or represented as, extreme and alienating for onlookers.

4.1. MPs' roles as climate leaders

In relation to climate change, MPs tended to see their leadership role as building coalitions and pressing for systemic change via climate policies and regulations. Some saw leading by example with high-impact low-carbon behaviour as a sensible accompaniment to these other leadership functions, rather than a central element of climate leadership. In terms of leadership styles, several MPs' described what might be considered a *transactional* form of leadership, intended to provide benefits to constituents in exchange for votes, as opposed to *transformational* leadership involving "*a connection that raises the level of motivation and morality in both the leaders and the follower*" [34] (p211). Many MPs described their leadership position as deriving from constituents whose interests they had a duty to serve. There was little evidence that MPs considered high-impact low-carbon behaviour to be directly serving the interests of constituents, and indeed there was general concern that it would be portrayed and perceived as the opposite, by some constituents at least.

4.2. Identity

The MPs described the balancing act they must perform to represent their various constituents, and were sensitive to the risk of alienating some constituents if they adopted high-impact low-carbon behaviours that were not perceived as social norms. Viewed through the lens of identity, MPs seek to retain a common identity with constituents, such that constituents feel that the MP is working on their behalf. Bearing in mind the general lack of trust in politicians [31,35] and the social distance that exists between MPs and most constituents, the bonds of identity are likely to be very weak in most cases, and this may contribute to MPs' reticence about taking on actions that can be perceived or portrayed as not representing the identity of constituents. The language used by MPs often suggested that high-impact low-carbon behaviour would set them apart from their constituents – reminiscent of the fear MPs feel of being perceived as "freaks" and "zealots" by their colleagues [74]. Therefore, those MPs that already take part in high-impact low-carbon behaviour tend not to publicise it and instead do it "on the quiet", therefore limiting the extent to which it is seen as fundamental to their identity as a leader. This perhaps suggests MPs are alert to the risks of "cultural protest", described by Jackson [64], as a reason that leading by example will not work. However, repeated polls show that climate change is now very high in the list of constituents' concern [75]. Therefore it may be that the fear of alienating constituents is overestimated, or may relate more to identities formed in relation to colleagues and the media, rather than with constituents themselves [65].

4.3. Trust

The "crisis of trust" in politicians and leaders more widely [31,35] is evident from the interviews, with MPs saying that if they were to take high-impact low-carbon behaviour it is unlikely to be taken in good faith, and their motivations would be assumed to be self-serving [68]. This lack of trust was seen by some MPs as a positive reason for them to lead by example as much as possible. However many MPs anticipated that genuine efforts to adopt low-carbon behaviours would be misinterpreted or misrepresented due to low levels of trust in the MPs' motivations for such behaviour. The scope for rebuilding trust through behaviour lies, according to many MPs, in remaining consistent over time and not making grand gestures or indulging in what they describe as "gesture politics". The question remains whether a leader taking low-carbon action could actually increase trust, in spite of the immediate sceptical responses they anticipate. The fact that MPs' high-impact low-carbon behaviour might be approved of by some constituents and disapproved of by others was evidence of the "trust dilemmas" experience by those in power [76].

4.4. Power

The MPs expressed differing views on their positions as leaders, the level of influence they have over others' behaviour, and the appropriateness of using this personal power. However, the most explicit form of power in evidence was MPs' anticipation of negative reactions in the media, which led many MPs to say they would avoid making overt statements about their low-carbon behaviour. It seems clear that some MPs would be far more forthright about their low-carbon actions if they did not anticipate these negative reactions. This self-censoring effect can be viewed as a form of "reinforcive" power that maintains the status quo, such that MPs are uncomfortable with the idea of leading by example with the intention of influencing others [56]. This reinforcive power appeared to reside most clearly with the media, who were mentioned by MPs several times in reference to coverage of Prince Harry and Meghan Markle, rather than residing with constituents themselves. Applying the framework of Steven Lukes' three dimensions of power, the second dimension seems to be at play here, such that the MPs' actions appear to be self-limited to avoid an anticipated reaction from another party (the media or constituents) [58]. This also points towards hegemonic power [59] residing within a system that tends to deride low-carbon behaviour while celebrating and promoting consumption through luxury culture, advertising, and a largely unquestioned growth imperative in the economy. Reinforcive power was also in evidence in the MPs' statements about not wanting to upset local businesses or industry with behaviour that might be perceived as going against their interests.

Overall, the interviews indicate that visible low-carbon behaviour from MPs has the potential to unleash considerable power that would stimulate a reaction in the media and send a signal to the public and constituents. However, the evidence from the interviews suggests that the power would be volatile and the results unpredictable, or predictably negative in the MPs' view, which dampened their willingness to exercise this personal power. It is uncertain, however, how the use of such power would actually play out. The power of anticipated negative reactions appears to be reinforcive for MPs, maintaining the status quo. However, high-impact low-carbon behaviour may have the potential to be transformative too, because of the message it sends about the leaders' beliefs, and the powerful responses that others' behaviour can trigger.

4.5. Flat view of society

The subject of climate-related behaviour change is often discussed and researched without explicit reference to the large differences between personal emissions [4,18,77]. This "flat" view of society was in partial evidence during the interviews. Several MPs made appeals to social justice, citing the unaffordability of low-carbon options for the less well-off and the desire not to penalise families who take only one holiday flight a year or those who cannot afford solar panels or heat pumps. These examples were used to argue against high-impact low-carbon behaviour as a leadership intervention because it wouldn't be fair to demand costly change from the less privileged who could ill-afford it. However, while these MPs shone a light towards the less wealthy, it was not pointed at the other end of the wealth spectrum. As such, the potential effects of low-carbon leading by example were not considered by MPs in relation to those who consume at higher levels due to greater wealth – those in higher socio-economic groups. This indicates that, instead of adopting a flat view of society, MPs applied a partial, unidirectional view that only considered the implications of leading by example for the less well off, rather than the most well off. We suggest this is a manifestation of hegemonic power where the consumption habits of the wealthy are not problematised or discussed in relation to climate change.

4.6. Morality

Morality was mentioned explicitly by two MPs in relation to

leadership and low-carbon behaviour, and several other MPs used morally-laden language about not being "too saintly" or "absolutely purist". Interestingly in these latter cases, MPs are alert to the risks of appearing *too moral*, rather than being perceived as having a *lack of morality*. Furthermore, the language used by two MPs suggested they believed the label of "virtue signalling" is an accurate description of some overt low-carbon behaviour ("the virtue signalling … is part of the problem"). This aligns with the established phenomenon of "do-gooder derogation", whereby an action that might be perceived as morally superior (low-carbon behaviour) is derided by the observer of the action in order to protect the positive moral self-image of those who do not act in this way [69]. It is worth considering that, as political representatives, MPs who dismiss low-carbon behaviour as virtue signalling may be defending the moral self-image of their constituents as much as themselves. Notably, such morally laden language was not used by any MPs in relation to high-carbon behaviour, indicating that it is low- rather than high-carbon behaviour that risks moral transgression.

4.7. Embodied leadership

There is some support for the concept of embodied leadership in the interviews. Some of the MPs are highly attuned to the potential for a "contradiction of leadership" if their climate advocacy is not consistent with their embodied actions. Furthermore, an aspiration towards embodied leadership can be seen from many MPs who try to align their personal actions, and the motivations behind them, with their work towards climate policies and societal change. Most MPs prioritised the need for systemic change, and some saw this as largely overriding any urgency for individual change, in effect rejecting the need for embodied leadership as it is theorised in this article. According to this outlook, climate change can be addressed using mainstream technocratic and managerial approaches to politics, society and the economy, and without embodied leadership or leading by example. From this perspective, there is no contradiction of leadership if leaders are not acting out low-carbon lifestyles to the best of their ability. Interestingly, the MPs who were sceptical about climate action were particularly passionate about contradictions of leadership, described by them as "hypocrisy", which they said they have often observed from MPs and celebrities. Judging by most MPs' sensitivity to such accusations of hypocrisy, a perceived lack of embodied leadership has the potential to undermine the credibility of climate leaders in general.

4.8. Implications for leaders

Our research points towards several barriers to be overcome before MPs (and perhaps other leaders) would be more willing to take overt low-carbon actions as an example to others. The physical and structural barriers to everyday low-carbon behaviours, including time, cost, and lack of options and infrastructure, deter MPs from modelling actions that might be unavailable to those with less wealth or access. It is not a novel insight to say that these barriers need to be removed to facilitate the uptake of widespread low-carbon behaviour. What our study sheds new light on is how negative social and moral connotations relating to low-carbon behaviours are propagated by the media and sometimes reproduced by pro-environmental MPs themselves. The description of low-carbon behaviour as "virtue signalling" and the use of language such as "we can't be too saintly" could be said to maintain, perhaps unintentionally, the idea that low-carbon behaviour can be derided and mocked, and that high-carbon behaviour remains the socially acceptable norm. We suggest that, rather than acquiescing to this social and discursive norm that tends to delegitimise displays of low-carbon behaviour, more pro-environmental MPs could contribute to normalising climate friendly action by facing down stigmatisation of it.

Perhaps the biggest barrier, intimately related to those already discussed, is the powerful vested interests that stand to lose from a move away from high-carbon behaviours. Fossil fuel, aviation, and car companies whose profits depend on sales of high-carbon products and services, and who fund media and political ecosystems, have a vested interest in maintaining high-carbon behaviour as usual [55]. Similarly, individuals at the top of corporate and political hierarchies are inevitably those whose lifestyles would be most threatened by a move towards low-carbon behaviours as a social and moral norm [78,79]. Doubtless these powerful actors are engaged in structural resistance to the mainstreaming of low-carbon lifestyles [53]. The question remains for MPs and other leaders as to whether they wish to mount a challenge to this structural resistance through their own behaviour, and whether it could have any effect. Further research could explore the theories of credibility enhancing displays and embodied leadership with a wider range of politicians and leaders in different fields, such as business leaders or celebrities. The public's appetite for, and response to, such leadership would also merit further study.

5. Conclusion

Our interviews with UK members of parliament have provided novel insights into the political sensitivities around low-carbon behaviour change. Many MPs felt inclined to act in low-carbon ways but were very cautious of explicit leading by example for reasons underpinned by social norms of high-carbon consumption and interpersonal moral judgements, both amplified by the media. The research indicates both the potential of leading by example with low-carbon behaviour and the likely resistance it would face. MPs' delicate position within systems of political and social power are confirmed by their tendency not to rock the boat by advocating for, or overtly modelling, low-carbon behaviour change. But bearing in mind the urgency of the climate crisis, the public's desire for bold political leadership, and the limitations and risks of relying on technical climate solutions, the time for leading by example may have arrived.

CRediT authorship contribution statement

Steve Westlake: Writing – review & editing, Writing – original draft, Resources, Project administration, Methodology, Investigation, Formal analysis, Data curation, Conceptualization. **Christina Demski:** Writing – review & editing, Validation, Supervision, Project administration, Methodology, Investigation, Conceptualization. **Nick Pidgeon:** Writing – review & editing, Validation, Supervision, Project administration, Methodology, Conceptualization.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Data availability

Data will be made available on request.

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