Informing decision making on climate change and low carbon futures: Framing narratives around the United Kingdom’s fifth carbon budget

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ABSTRACT

Narratives can help increase experiential engagement with climate change and build support for transitions to a low carbon future. The UK’s 2050 climate targets provide indicative frames through which emissions reductions could be translated to different contexts. The scenarios outlined in the UK’s fifth carbon budget will require lifestyle changes which may need to counter low levels of acceptance of the need to change through technological, political and behavioural initiatives. This paper explores the role of narratives of the UK’s fifth carbon budget in increasing engagement to climate change. Data are presented from thirty semi-structured interviews with UK academic, policy and practitioner communities. Six narratives are identified that could enable positive engagement with a low carbon future and better engagement on climate change: (i) showcasing investment opportunities; (ii) maintaining independence and freedom of choice; (iii) guiding audiences to visualise a low carbon future; (iv) demonstrating broader appeal, salience and impact of not doing anything; (v) supporting transitions and change; (vi) highlighting benefits to quality of life. Implications of these findings to public engagement on climate change and perceptions of how life may need to be reconfigured in a low carbon future are discussed.

1. The context of engagement on climate change in the United Kingdom

The scientific imperative to act on climate change is mirrored by increasing political ambition to limit global greenhouse gas emissions and ensure global temperatures do not rise beyond 2 °C [1], whilst “pursuing efforts to limit the temperature increase to 1.5 °C” [2]. The UK passed its Climate Change Act in 2008 providing the world’s first legally binding framework which imposes UK-wide Greenhouse Gas (GHG) emission targets of 80% reduction by 2050 over 1990 levels. The Act required that the UK government set legally binding carbon budgets, establish a Committee on Climate Change (CCC) as well as a National Adaptation Programme (NAP) outlining the risks to the UK from climate change [3]. These carbon budgets (Table 1) ensure the implementation of the Act’s 2050 emissions targets [4] and in 2011, the UK government released its Carbon Plan [5] outlining policies and proposals to meet the fourth carbon budget; the overarching purpose being to serve as a plan for a transition to a low carbon economy in the future. In 2016, the UK government approved the CCC’s proposals for the fifth Carbon Budget to reduce GHG emissions in 2030 by 57% [6]. This forms a rich national government narrative on the need to act on climate change although a lack of substantial drop in GHG emissions questions the extent to which this narrative is effective. There is arguably a limited narrative which ties together this national imperative with cross-government departmental focus on food, energy, transport, water, health.

The UK’s 2050 targets provide indicative frames through which emissions reductions could be translated to different societal contexts. However, it is important to caveat that these are targets and hence it is impossible to predict exactly what a 2030 UK would look like due to the changes in economic, demographic, behavioural and other external factors which could influence the way in which emission reductions occur and change. Importantly, many of these changes may be an extension of the current ‘status quo’ with a number absorbed into social and infrastructure ‘fabrics’ hence reducing their visibility. Consequently, individuals may not be aware that the changes they are making are a consequence of the need for emissions reductions nor is it possible to predict with certainty that changes that occur, resulting in GHG reductions, will be directly attributable to low-carbon initiatives. This may be problematic considering the impact of perceived barriers on development of sustainable technologies such as smart homes which can facilitate societal shifts to low carbon solutions [7]. Indeed, technology such as smart meters generates both positive responses, in that it can enable energy savings and accurate billing, and negative responses...
around privacy and mistrust of suppliers. Positive responses to environmental concerns and engagement around the concept of sustainable changes are facilitated by utilising these types of technologies that are more salient and enable consumers to engage with the concept of low carbon initiatives.

Tools are being developed to increase engagement with the concept of reducing personal carbon emissions and changes needed to reach emissions targets. The 2050 Calculator, for example is such a tool developed by the UK’s Department of Energy and Climate Change (DECC) enabling experts and non-experts to ‘play with’ and negotiate different energy mixes and behavioural changes to assess ways of achieving an 80% reduction in GHG emissions. In order for the UK and other countries to take advantage of the opportunities associated with a low carbon future, a level of engagement at the individual level is required, and reliance on policy regulation alone is insufficient. A core requirement to ensure this engagement and achieve the fifth carbon budget will be buy-in from consumers, specifically around energy efficiency in buildings, driving a shift to low carbon forms of heating, continuing efficiency improvement in vehicles, rolling out low-cost, low-carbon power and supporting the development of emerging options such as carbon capture and storage. A larger dependence on public engagement and behavioural approaches is therefore needed through a process of active participation (whether physical or in thought), where mediation and co-production are actively constructed through this engagement process, resulting from interactions between those involved in the process: “The who (publics), what (issues), and how (procedural formats) of participation do not externally exist in a natural state but are actively constructed through the performance of collective participatory practices.”

The UK public supports climate change mitigation and demonstrates concern for energy security with preference for demand-side as opposed to supply-side options. There is public appetite for action on climate change and reduction in carbon emissions as evidenced by research on public engagement on the fourth carbon budget, which demonstrated a general sense of pride in the UK’s leading role in this space, and acknowledgement of the need for behaviour change at the individual and household levels. The most apprehension, however, appears to be around the perceived cost of measures to address climate change and perceived trust toward new, less-tested technologies, and narratives could be most effective in addressing this. The scenarios outlined in the fifth carbon budget will require behavioural and lifestyle changes which may need to counter low levels of acceptance and indeed framing this in a positive and inclusive manner may further increase engagement to the issue making it a social reality.

2. Using narratives to engage with society on low carbon futures

Individuals filter information (on climate change) based on their cultural and political viewpoints, weighing the risks of climate change with solutions available. An over-reliance on a linear flow of information where a ‘problem’ and ‘solution’ approach is adopted and where it is assumed that providing information about the issue (e.g. climate change) will therefore be sufficient to lead to a solution to alleviate its impacts (e.g. reduce greenhouse gas emissions through behavioural changes). This model fails to fully consider the complexities and intricacies of social and cultural elements that affect information acquisition, the evidence-decision making ‘interface’, and that knowing more about the science of an issue will not necessarily increase understanding or lead to action. It has been suggested that rather than fixating on gaps in knowledge or indeed polarised arguments, that a focus on overlaps in perceptions and motivations to engage with the issue would enable constructive dialogue and deeper understanding of its intricacies and opportunities for societal shifts. Work by Shove addresses some of the complexities of informing sustainability-related decision-making processes, the importance of going beyond information and the need to consider the impact of attitudes and values that drive behavioural traits and how these are impacted by the context within which they are constructed and applied. Furthermore, the complexities of the multiple disciplines that can help inform this process and shed light as to how better communication of climate change may increase its efficiency, are vast and should not be neglected. The context within which communication on climate change occurs is important as the nature of and the way methods are used to engage audiences will go beyond the impact of content and affect how communication is received, perceived and acted upon (or not).

This linear approach, whilst recognised as being limited in engaging the public on the issue, is to some extent the process by which scientific evidence informs policy making, and hence an assumption that a similar process would work with the public is not surprising. However, this has important implications to decision-making and support for or against particular policies because if an individual’s level of scientific knowledge predicts one’s risk perceptions, and risk perceptions predict policy preferences, which can then influence the behaviour of policy actors, then the public’s understanding of these complex issues becomes a lynchpin to the policy process. Deeper engagement is therefore needed, above information dissemination, with the individual, to reframe attitudes or behaviours and enable efficient transitions to low carbon lifestyles. However, as discussed above, people’s values, the degree of trust in the messenger and the context within which decisions are made influence people’s preference for certain policies. The perceptions of climate change and associated risks are therefore much more complex in nature and call for insights from across disciplines. Behavioural decision research, for example, emphasises the importance of context by measuring values and preferences of people when they are dealing with something unfamiliar; Lichtenstein and Slovic, 2006, cited in [12].

Cox makes a good case for scholars working on environmental communication to consider the distinction between mobilizing on climate change and encouraging mobilization that provides a means to an end. An understanding of the policy context is thus required to ensure an alignment with environmental communication approaches to better engage and mobilise publics. However, ‘much of the scholarship in this area has focused on the discursive representations, framing, and perceptions of climate change itself and its seriousness, rather than the relationships among specific communicative efforts (e.g. framing) and their strategic or consequential potential within the economic, political, and ideological systems in which energy policy is embedded’. Whereas, Daniels and Endfield, in their summation of narratives of climate change, suggest that the method in which people receive, interpret and understand information on climate change, particularly of its ‘dangerous’ nature, affects resulting actions. People often produce their own stories of climate change such as how they feel about it, how it may have affected them, how they personally respond to it, providing a window into personal experiences and self-reflection. Such an approach where storytelling enables ‘individuals to re-work and order experience, evaluate events and construct meaning and knowledge’ enables scientific data to be considered in the context of the individual’s own story as opposed to considered in isolation with little context. Narratives enable the construction of a coherent message on climate change, and are better constructed from dialogues, where
there is a teller and a listener, and where communication through a personalised every day lens offers the opportunity for social change. The production of such narratives must be, according to Bushell et al. [29], ‘seen as an iterative, engaging process of dialogues, not just a single, linear process with a set of objectives and a narrative that is then broadcast to the public’.

The way climate change is framed, therefore, has a profound impact on how it is perceived (and the way it is perceived may also impact the way it is framed), and engagement may increase if the message is framed to sub-groups of a population who may share similar values, beliefs and world views [30]. For example, framing the co-benefits of climate change and low carbon transitions through health, well-being [31,32] and energy security [33] lenses can increase engagement on the issue. Adopting such an approach which explores people’s values and how they relate to climate change and carbon emissions may therefore provide an effective way of increasing engagement. There are a number of ways in which narratives can be constructed depending on the issue in question, the purpose of the narrative and the audience-messenger interface. However analysing narrative construction is not the focus of this paper as there have been a number of persuasive accounts of the role of narratives. For example, Throgmorton [34] compares narratives to planning where future-oriented texts and carefully chosen language are used to enable audiences to see a planned future as desirable, and Janda and Topouzi [35] discuss how in the context of energy, story-telling is generally conducted through telling ‘hero stories’, ‘learning stories’ or ‘horror stories’. Recognition of the role of narratives as mechanisms to inform awareness and decision making is reflected not only in research discussed in this paper but also in the growth of work in this space. For example, in the UK, the Imperial College Grantham Institute hosted a roundtable on climate change strategic narratives as did the Leeds Social Sciences Institute on exploring narrative in policy and policy analysis in January 2017.

Narratives are used in a variety of disciplines [36] as a mechanism for telling stories on issues which may be difficult to engage with and provide useful mechanism through which to link them to an audience’s social reality [37]. There is no single definition of narratives but key characteristics have been identified in the literature (Table 2). They are useful tools and indeed politicians use narratives to engage with their constituents [42], teachers adopt learning narratives in their teaching methods [43] and enable a deeper connection between theoretical and experiential experiences [44]. Narratives are used to enable socio-technical transitions [45] and artists utilise them in their work to facilitate deeper engagement with different audiences [38] enabling a better understanding of the personalised perceptions of climate change and the role of emotion and logic in engaging individuals with issues of climate change [46]. They enable the framing of complex and challenging societal issues such as climate change, in a way that aligns and resonates with the values receiving these stories and makes climate change more tangible [47]. In particular, narratives can help with understanding the role of stakeholders and what drives them [...] when making policy predictions and implementing strategies and can provide additional support for explaining ‘unintended consequences in policy/initiative outcomes’ and may help in testing ‘the ethical nature of predictions in policy formulation and evaluation’ (35,529).

Historically, climate change has been communicated primarily through the use of science-heavy data of facts and figures to help inform policy making, and whilst this provides useful anchors to communicate complex information, they are not known for their widespread success in delivering a compelling argument to act on climate change to those, such as the public, who are not data-inclined [48]. Indeed analysis of the way in which complex climate science information in the Inter-governmental Panel on Climate Change Fifth Assessment report, revealed that the Summary for Policy Makers, intended to be understood by non-experts, required readers to have a good understanding of scientific knowledge in order to fully grasp the content and its applications [49]. The process of developing and using narratives could help as it is a common learning and teaching approach, as explained by Clark [43,3] “we make sense of all experience by narrating it (constructing it as a kind of story)” and thus adopting this approach is growing in popularity in climate change communication [50,21]. Salience to climate change could be increased, highlighting the link between local impacts of climate change (such as weather events) which may have an impact on the public’s construction of narratives and mental models of evidence. This would enable deeper engagement, increased concern and action on climate change [51], particularly so if narratives are framed around local relevance and place attachment [52].

The use of narratives can help overcome perceived barriers to change [15] and bridge the gap between what is referred to as the transmission approach (a linear process of information dissemination clearly distinguishing between a ‘sender’ and ‘receiver’ of information, with limited public involvement) and the participatory approach (multi-directional process of dialogue between sender and receiver, and with extensive public involvement) [53]. Narratives can enable a better appreciation of the audience’s interpretation of a message and better incorporation of the context of communication (often kept separate from communication through the transmission approach) whilst anticipating potential misinterpretation of communication and delayed decision making processes (recognised as weaknesses of a participatory approach). In addition, Spence and Pidgeon [54] found that positive engagement with climate change was found to occur when participants were asked to consider the social impacts of climate change as opposed to personal ones. A survey of the UK public assessed what people value the most in life with a focus on compassionate values such as ‘helpfulness’, ‘equality’ and ‘protection of nature’ as well as selfish values including ‘wealth’, ‘public image’ and ‘success’ [55]. Close to three quarters (74%) of people considered compassionate values to be more important than selfish ones. This was found to be particularly true amongst individuals who demonstrated low feelings of inclusivity, who felt less positive about being involved with others, who experienced greater social alienation, and who were less likely to feel like they fit in with wider society. This suggests that increasing feelings of inclusiveness and positivity may reduce disengagement from the issue. Similarly, Demski et al. [56] identify a set of core values which ‘represent identifiable cultural resources people draw on to guide their preference formation’ (59) and that by focusing on these values when designing communication approaches could lead to more constructive dialogue and decision making. These are important to consider when advancing climate communication and utilising narratives to increase engagement as this research suggests that moving away from personal impacts and broadening this out to the social scale may still enable salience to the issue whilst facilitating constructive engagement.

3. Approach

This paper assesses the role of narratives in increasing public engagement to climate change where we explore how narratives framed around a positive vision of a low carbon future could enable more constructive public dialogue on climate change. This is discussed in the context of the UK’s fifth carbon budget, a particularly relevant and salient piece of legislation that will impact the UK’s path towards a low carbon economy. In addition we consider this in the context of audiences who might feel less inclined to respond favourably to such data. The current state of play on increasing public understanding of climate change and public engagement on low carbon transitions informed a thematic approach to this research by exploring: (i) societal responses and needs to a low carbon future, (ii) framing a low carbon future, and

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Table 2
Definition and characteristics of narratives (from selected sources).

<table>
<thead>
<tr>
<th>Definition and characteristics of narratives</th>
<th>Source</th>
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<tbody>
<tr>
<td>“An account of a series of events, facts, etc., given in order and with the establishing of connections between them; a narration, a story, an account.”</td>
<td>Oxford English Dictionary</td>
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<tr>
<td>“Stories of this form often have a beginning, middle, and end: an introduction to the situation, a series of events often involving tension or conflict, and a resolution.”</td>
<td>Segel and Heer [38:1]</td>
</tr>
<tr>
<td>“While stories often concern interacting characters, they may also present a sequence of facts and observations linked together by a unifying theme or argument.”</td>
<td>Bushell et al. [7]</td>
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<tr>
<td>Strategic narrative: “a dynamic and persuasive system of stories, originally generated and encouraged between government, business and civil society”</td>
<td>Elliot [39]</td>
</tr>
<tr>
<td>“The development of a strategic narrative is a unifying concept, an umbrella under which the incredible diversity of literature and projects that aim to inspire further action on climate change can be unified, bringing them together into a cohesive, coordinated and effective message.”</td>
<td>Hinchman and Hinchman [40,xvi]</td>
</tr>
<tr>
<td>Organise a sequence of events into a whole so that the significance of each event can be understood through its relationship to that whole. In this way a narrative conveys the meaning of events”</td>
<td>Jones [60,8]</td>
</tr>
<tr>
<td>“discourses with a clear sequential order that connect events in a meaningful way for a definite audience and thus offer insights about the world and/or people’s experiences of it”</td>
<td>Jones and McBeth [36]</td>
</tr>
<tr>
<td>“each narrative has a setting, characters, and a solution to the problem of climate change”</td>
<td>Wozniak et al. [41,470 &amp; 471]</td>
</tr>
<tr>
<td>Narratives have a setting, a plot (beginning, middle, end), characters (heroes, villains and victims), and the moral of the story”</td>
<td></td>
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<tr>
<td>“visual ‘hooks’ on which to hang news reports”</td>
<td></td>
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<tr>
<td>“narratives connect political debate about problems and solutions with media users’ experiences and identities by offering enduring symbolic systems”</td>
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(iii) framing a low carbon future as positive and desirable.

Thirty semi-structured interviews were carried out with individuals working in academia (n = 10, labelled as ‘aca’) in the discussion), policy (n = 10, labelled as ‘pol’) and practitioner organisations (n = 10, labelled as ‘pract’) in the UK, selected based on their knowledge and experience of climate policy, emissions reductions initiatives and constructive mechanisms to engage the public. Organisations represented by interviewees included universities, UK local and national government departments, city-based climate initiatives, consultancies and climate media/communications agencies. Interviewees were from a range of backgrounds and expertise with specialisms including climate science, UK carbon budgets, public engagement, behavioural science, climate policy, with varying levels of seniority to ensure a representative sample. Interviewees were asked a series of questions about how to engage audiences on the UK’s fifth carbon budget, how this relates to people’s day to day lives, low carbon transitions and how engagement on this could be framed more positively. Interviews consisting of 10 questions under the three themes outlined above (Table 3), were conducted in the UK with scripts developed and piloted beforehand. The study received ethics approval by the Anglia Ruskin University Psychology Departmental Research Ethics Panel (DREP) and ratified by the Faculty Research Ethics Panel under the terms of Anglia Ruskin University’s Policy and Code of Practice for the Conduct of Research with Human Participants.

Interviewees were recruited by adopting a snowball methodology, with interviewees identified based on an evidence review as well as building on the networks and knowledge of the sector and assessing additional suggestions of other experts to approach made by the interviewees. Each interview lasted between 30 min and one hour, was audio-recorded and data was transcribed and analysed using discourse analysis via the software NVivo. Final interview transcripts were sent to interviewees for review and quality assurance and responses were kept confidential and made anonymous to encourage a frank discussion of positions and to protect personal privacy. A thematic discourse analysis was conducted on the data to draw out prominent themes discussed with the interviewees.

While the sample size (n = 30) and geographic representation of the participants (i.e. UK) necessitates caveats with regards to the representation of the findings and suggests the need for further research with larger sample sizes and representation from different geographical and sectorial populations, data from these interviews nonetheless provide valuable insights into how to frame a 2030 future as positive and desirable and reduce perceived barriers to such a future.

4. Results and discussion

Analysis of interview data revealed six dominant narratives that participants stated would be most effective in engaging the public, particularly individuals who may be less inclined to want to change their behaviour, on the concept of a low carbon future. Framing these narratives in a positive way would further ensure greater salience and sustained engagement in the longer term.

4.1. Investment, wealth, cost

A dominant narrative that emerged was that a low carbon future could provide investment opportunities to individuals. This was felt to be particularly effective in engaging a less engaged subgroup of the population who are more likely to seek personal gain from any changes they felt they may need to endure in a low carbon future. This was felt

Table 3
Themes and interview questions.

<table>
<thead>
<tr>
<th>Theme</th>
<th>Question</th>
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<tr>
<td>Societal responses and needs to a low carbon future in 2030</td>
<td>● Thinking of the year 2030, what does a low carbon future mean for society?</td>
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<td></td>
<td>● What are the main opportunities that emerge for society from such a future?</td>
</tr>
<tr>
<td></td>
<td>● What are the main challenges/obstacles/barriers that emerge for society from such a future?</td>
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<tr>
<td></td>
<td>● Do you think that the ways we have been talking about this (as a transition, a low carbon future, climate mitigation) are effective for a mainstream or sceptical audience?</td>
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<td></td>
<td>● [How else] could we effectively frame these changes?</td>
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<tr>
<td></td>
<td>● How would people respond to changes needed in 2030?</td>
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<td></td>
<td>● In what ways would a low carbon future validate and reinforce the qualities of life that people currently value most, or even restore the qualities they fear we might be losing?</td>
</tr>
<tr>
<td>Framing of a low carbon future in 2030</td>
<td>● Do you think that the ways we have been talking about this (as a transition, a low carbon future, climate mitigation) are effective for a mainstream or sceptical audience?</td>
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<td></td>
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<tr>
<td></td>
<td>● How would people respond to changes needed in 2030?</td>
</tr>
<tr>
<td></td>
<td>● In what ways would a low carbon future validate and reinforce the qualities of life that people currently value most, or even restore the qualities they fear we might be losing?</td>
</tr>
<tr>
<td>Frame a low carbon future as favourable and desirable</td>
<td>● In what ways would a low carbon future validate and reinforce the qualities of life that people currently value most, or even restore the qualities they fear we might be losing?</td>
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</tbody>
</table>
to be a clear way of appealing directly to their values and help overcome perceived negative feelings towards the need to change consumption patterns by demonstrating the financial benefits of doing so. Ultimately, whilst change is needed and this may be costly, framing this as a benefit in the long term (even if short term costs are incurred), or as an investment into one’s future, may prove more beneficial than simply demonstrating the financial gains with no time frame associated.

“Just plain old investment opportunities, you know? Investment in different types of energy and different types of technology. The challenge, I guess, with the low-carbon future, is the narrative around reducing consumption because if you reduce consumption, that necessarily has implications for your mode of society, your economy.” (Aca8)

Similarly, communicating certain incentives associated with a low carbon future, such as financial gains, without providing actual economic incentives, may prolong a desire to invest, financially or otherwise, in a low carbon 2030. This may overcome the limits of the information deficit approach and bypass the ‘need’ to seek to alter attitudes, understanding and awareness (of the need for change and the case for a low carbon future). If these benefits are visible (with interviewees emphasising that these do not need to be about low carbon or sustainability) and framed appropriately, then the public should be able to decide the most profitable situation they can create for themselves.

“If the circumstances changed, so that it were a financially attractive proposition, and not too much of a hassle practically” (Aca2)

“I think that provided the net benefit is there, then sometimes you don’t necessarily have to win over hearts and minds first. They’ll just follow the behaviour” (Pol5)

4.2. Maintaining independence and freedom of choice

Interviewees referred to a fear that tends to emerge when engaging the public on the need for transitioning to a low carbon future which is that of the threat of, or perceived threat of, a loss of choice of options and freedom to make these choices. A low carbon future is, at times, understood to imply a considerable reduction in the range of options that will be available to people and suggests a deliberate removal of choices from people, with the perception of the government or big businesses taking control over decisions that are felt should remain with the individual.

“Well it would simply mean that people find themselves with new options, some of which they will have little control over. And some of which they will have some choice. So I suppose appliances and behaviors might have changed a bit.” (Aca2)

“They don’t want government out all-together but they want government playing an appropriate role and not being too present in their lives and therefore have more control over one’s own destiny and I think that’s why it’s important in terms of society, I think that choice. And it’s forward looking about the future, you know, choosing a better life or choosing a better future, I think that’s the kind of spirit you want to try and convey to them.” (Pract7)

A low carbon future would provide a new and different type of freedom which in itself may be difficult to envisage or visualise in the short term. New options will be required to achieve the fifth carbon budget (for example through new technology as described in Section 1), possibly reducing the overall amount of decisions that need to be made by people, whilst ensuring the range of options available still provide the best range from which individuals can form their own decisions. In terms of energy generation and use, for example, a low carbon 2030 is expected to have a more electrified energy market with greater range of freedom for consumers to choose where their energy is sourced (e.g. from renewable sources, or local community initiatives). Maintaining a similar level of freedom to make one’s own choices alongside the introduction of smart technology to facilitate decisions (e.g. remote home heating controls) were considered fundamental to building a positive framing of a low carbon future

“Freedom to make your own choices, and benefit.” (Aca2)

“Encourage them to buy a different kind of car, heat their home in a different way, see that it’s very sensible to really transformed the way we generate electricity in the country. I think the issue is … the time scale dictates that you can’t just wait for a sort of generational change. I think there’s quite good argument that the next generation of conservatives will be wholly bought into large parts of this agenda in a way that our age and up generation may not be.” (Pol2)

Preserving independence was a strong narrative that emerged from the interviews, and one which is constantly sought to be preserved, which emerges as key to minimise disengagement from climate change and a low carbon future. Low carbon technology is not always considered to be appealing and discussing the changes needed under a 2030 low carbon UK may have more appeal if framed in the general context of sustainability (moving away from environmental sustainability as a primary frame) towards sustainable independence and the benefits this brings.

“You’re moving towards more acceptable when you talk about sustainability, but when you take it in its pure meaning, not this green language. Sustainability in that, if my house was sustainable, then I would be independent. You know? I wouldn’t need to rely on anyone, and that would be great if it worked.” (Pol5)

“This is not about constricting vintage freedoms, this is about giving people the opportunity to use their resources more efficiently.” (Pract10)

4.3. Visualising the future

All interviewees expressed how challenging it was to visualise a 2030 future, let alone a low carbon one. Similarly they felt that reflections in the future on what a past world had looked like were even more challenging and less likely to occur. A way in which to overcome and enable greater engagement and salience was thought to be through highlighting the possible future and the range of possible alternatives that may occur.

“You have to first ask them, and then even the answer that they will give about some hypothetical future is not how they will really react because they will not be able to predict it themselves.” (Aca1)

This would also work both in terms of framing and visualising the impacts of climate change that may manifest in a 2030 world just as much as the mitigation approaches needed to reduce greenhouse gas emissions that exacerbate these impacts. Changes that may be needed to adapt to climate change may therefore also align well (or indeed conflict) with changes required to adjust to the requirements of a lower carbon world; interviewees felt that opportunities to highlight this should not be neglected in narrative development.

“There would be benefits possibly around, you know, transitioning to cheaper sources of fuel, or giving them more autonomy around that.” (Prac2)

“On that time frame, by 2030, so there’s two different things that are going on. One is that on that time frame, you know, what climate impacts are we going to be seeing, that we haven’t already seen? But the other one is, what [are the] changes in people’s lives, on that time frame? It’s likely to be quite traumatic, and certainly much more dramatic than people have really internalized.” (Aca7)
4.4. Broader appeal, salience and impact of not doing anything

Whilst a low carbon future in 2030 may be difficult to visualise, creating a narrative that increases salience to changes that will be required, bringing it home to people, how these may entail little rather than large changes, and how these align with existing lifestyles may further enable deeper engagement from people. For example, demonstrating how changes needed are and will be logical, will essentially align with existing and evolving needs of individuals. Building this narrative would increase salience towards trends in lifestyles and behaviours that make sense and fit within individual’s lifestyles, further helping to normalise the lifestyle shifts needed.

“I think perhaps, something to do with normalizing things would be helpful, so things not feeling like they’re particularly radical, but that they are sensible and logical, and they’re the solutions that need to be found, and that they’re not coming from an agenda. They’re not from an opinionated viewpoint or a green or a left agenda. It’s just sensible, logical steps based on evidence.” (Pract3)

“I think, make it more about people’s day to day lives. I think that, that’s been missing from the conversation.” (Aca5)

“I think of actually kind of bringing it home to people, (….) making it real to them.” (Pol3)

Such a salient narrative would broaden out to a wider appeal of enacting initiatives than enable a shift to a low carbon future. In doing so a greater connection between individuals and climate change would highlight the implications of not adopting changes required. The broader impacts, in terms of benefits and convenience for example would, as a result, become more apparent and lead to sustained changes in the long run.

“I think the idea of not wasting energy, of not buying more stuff than you need. Of taking care of your local environment, not having, totally congested, urbanized areas, is one that resonates with them.” (Pol2)

“their lives, so their communities, their towns, their villages and cities and what it would mean for their lifestyle and their groups, whatever social group they fit in’s lifestyle” (Pol3)

“Cost, convenience possibly because I don’t think that the convenient solutions are being created, you know, the technological leaps that means that actually greener living is going to be really quite pleasant. I don’t think that case has been made yet.” (Pol5)

Showing what a high carbon world might look like could be an effective method of overcoming resistance to change, if managed tactfully. By addressing fears associated with change and providing narratives on lower uncertainty about the future, a more secure future due to more efficient and sustainable options would enable individuals to understand where they still have choices to make.

“So, a low-carbon society, the benefits being around clean, healthy environment to live, work, enjoy. I think for that audience in particular, perhaps emphasizing the benefits to the countryside, and to the landscape, and to the more conservation elements of what a low carbon society could bring or what the opposite for low-carbon society wouldn’t. So, if we’re not to go down that route, then what the flip-side would be and how unappealing that would be.” (Pract3)

“It would be that, painting a very clear, secure future and we have a plan to get to this point; um, that it is feasible and doable. Um, and that, it’s a positive thing to get there, rather than a scary thing.” (Aca8)

4.5. Preserving the status quo/less change

Many of the interviews highlighted the prevalence of general resistance to change within people’s lives, regardless of personal values and political views, required under a 2030 low carbon UK. This is further likely to increase disengagement due to the perception for the need for significant, disruptive and unappealing changes to one’s lifestyle. As interviewees revealed, however, persevering and maintaining engagement through demonstrating the broader social benefits of change (moving away from low carbon frames) could help address perceived barriers to change and enable individuals to understand changes required may not be as large as they expect.

“I think there would be more appreciation of the social benefits at hand by moving to a low-carbon future that was devolved in that way, but you’ll also have a segment of society who have no interest at all, and you’ll actually … you’re going to be forcing them to consider these things.” (Pol5)

“If they choose to be disengaged, they don’t want to be engaged, and you’re saying, well, this is actually going to impact your life very little and you just introduce it” (Pol5)

As discussed above, a 2030 low carbon world will require changes in terms of emission reductions and adaptation to impacts of climate change ultimately to help maintain current standards of living, therefore disengagement could dissipate and provide an opportunity to engage on the positive and beneficial elements of a low carbon 2030. This could mean that a change taking place in one area (e.g. adoption of a new technology) may open doors to change others; and changes required under a changing climate and low carbon world may take place even for non-low-carbon reasons.

“So, you could argue anything that hints at change or transition, however you couch it, could to some audiences, possibly [who] by their own nature, they’re conservative, they want to make things stay the same.” (Pract6)

“It could be it’s about preserving the aspects of ways of life that people like and they’re familiar with and perhaps highlighting how things could change in the future in a positive context as well that could be of things that they value personally, whether that’s, you know, their homes, the kind of episodes of winter flooding is highlighted vulnerability in certain communities and an Englishman’s home is his castle etc so appealing on that front could be an issue” (Pol1)

“So I guess there might be an angle there, uh, because if you’re worried about external threats to a great degree, then you might be more interested in creating a self-sustaining environment.” (Pol5)

Providing aspirational frames and narratives through which to communicate may further increase the appeal of a low carbon future and demonstrate how this can align with the status quo, thereby alleviating fears and unease about the need for change. Change, interviewees stated, could also be good, however rarely is this considered to be the case in reality. Whilst visioning 2030 may be a slight challenge, reflection on how transitions have occurred in the past and how individuals responded to this (i.e. whether these were out of necessity or inadvertent) may enable deeper engagement with the process of change and further reduce resistance to this.

“I think the benefits could be around the smarter ways of doing things, and I think it would need to somehow tap into the aspirational qualities that might appeal …” (Pract3)

“Well, I guess that we’ve been trying to think about how transitions happened in the past. I don’t think it’s about, say, trying to predict the future, saying, ‘This is what will be in your home. This is what it will look like. This is how the future will be,’ but kind of trying to emphasize the positive benefits of change that has happened previously.’ (Aca8)

“I think climate change is scary, in part, because it’s uncertain. And how we go about dealing with it, I don’t think … Because it’s very complicated, no one knows what’s gonna happen, there’s a lot of uncertainty and risk around what, what will happen in the future. What will our
homes look like? What will we be able to afford? What will our lifestyles be like? What will our communities look like? And this, you know, even relates to things like, you know, more migrants from climate-change-affected areas, things like that.” (Aca8)

4.6. Quality of life: safe, clean world

Preserving or enabling a better quality of life is often associated with cleaner air and water and less pollution, which fits well within a narrative that creates a positive vision of a (low carbon) future and appeals to the values of many. Broader benefits of the changes needed can demonstrate the appeal of a low carbon, less polluted future whilst highlighting social benefits that accompany these changes such as a safe and secure future to better suit the needs of individuals, families, communities and wider aspects of people’s lives.

“Being able to go somewhere that it’s safe and clean with their children, and to have a knowledge that the child’s future is safe… It’s really difficult because the alternative is not really viable, so a non-low carbon society is so unappealing and potentially so disastrous…” (Pract3)

“And you know, benefits around other lifestyle or living type factors, so, things like air pollution, noise.” (Pract2)

Combining this with a narrative highlighting how changes are needed in a low carbon future, which are in fact a way of maintaining current lifestyle standards and preferences, would enable a better sense of what is achievable to be constructed with minimal disruption to individuals.

“So maybe it should be framed as building, you know, as opposed to moving away, or transitioning, it should be reinforcing, or building, or foundation. It should be that kind of wording… Going back to that building narrative, let’s rebuild, and regenerate, and build a better city.” (Pract6)

“It would need to be showing how this makes the UK a more secure country. How it’s driving the economy, how decarbonisation is actually creating economic opportunities.” (Pol6)

5. Conclusion

Research has indicated, further reinforced by the data reported here, that engagement to climate change may increase if messages are framed as narratives around specific themes such as those described in this paper. This is particularly true if these narratives move away from the data, facts and figures the public often associate with climate change, which often form the basis of communication on the issue, and are aimed at specific audiences who may share similar values, beliefs and world views [30]. In addition, research suggests that the way in which evidence assessments on climate change are put together and disseminated do not fully align with the needs or ability of end users [49,57] and hence narratives would offer a viable mechanism through which to do so.

In order for the UK to take advantage of opportunities associated with a low carbon future, reliance on policy regulation alone is insufficient and deeper engagement at the individual level is required. Engaging people on a low carbon future is therefore vital for the UK to reduce its greenhouse gas emissions and achieve its carbon budgets. A variety of approaches exist in order to address this including informing people about the risks and/or encouraging behaviour change through policy. However, there are key issues, stemming from limits of adopting an ‘information deficit’ approach, cognitive dissonance and a need to account for the different values of audiences as well as various contexts which can influence decision-making processes. It is possible to identify key opportunities to engage people, especially those that may be sceptical about the need for action and who may tend to be on the right of the political spectrum.

Although climate change information is not a driver of behaviour change, it has been found to be a powerful re-enforcer for example with travel behaviour [58] when combined with specific information relevant to the individual and to contexts in which decisions are made. This further enables connection to and salience with climate change through which narratives can act as an important medium. For those individuals who may remain undecided on climate change these could more easily be reached by personal experiences of climate change [59]. Climate communication must therefore go beyond traditional linear models of communication and aim to engage its audiences by increasing deep engagement and the perceived ability to change behaviour whilst informing on the availability of alternative options. It is apparent from the data reported in this paper that there is a reluctance to adopt changes necessary for a low carbon future, or even in some case to visualise what these changes may entail, due to a lack of tangible examples and narratives of what it would look like to live in a low carbon world, what life would look like, how people would (continue to) prosper while adopting the changes necessary within a low carbon future.

The research reported here outlines six possible narratives, extracted from interviews, which would be most effective in framing a low carbon future as one that is positive and desirable, and hence more likely to engage those who are less inclined to want to change their behaviours or lifestyle. These are: (i) showcasing investment opportunities; (ii) maintaining independence and freedom of choice; (iii) guiding audiences to visualise a low carbon future; (iv) demonstrating broader appeal, salience and impact of not doing anything; (v) supporting transitions and change; (vi) highlighting benefits to quality of life. The paper discusses the implications of these findings to public engagement on climate change and perceptions of how life may need to be reconfigured in a low carbon future. Whilst change is needed and may be costly, framing this as an investment into one’s future may prove beneficial. This may appeal directly to people’s values and help overcome perceived negative barriers towards the need to change consumption patterns. A fear that emerged is that of a loss of choice and freedom of choice. A low carbon future provides a new and different type of freedom, whilst maintaining independence, which in itself may be difficult to envisage or visualize in the short term. Whilst a low carbon future in 2030 may be difficult to visualize highlighting how these may entail little rather than perceived large changes, and how these align with existing lifestyles may further enable better engagement.

Interviewees also demonstrated the view that change could also be good, and hence should be framed appropriately in narratives, however, this is rarely considered. Interestingly, whilst visioning 2030 may be a challenge, reflecting on how transitions have occurred in the past and how individuals responded to this can be useful. Broader benefits could also demonstrate the appeal of a low carbon, less polluted future whilst highlighting social benefits such as a safe and secure future, with better quality of life to better suit the needs of individuals, families, communities and wider aspects of people’s lives. Demonstrating what a high carbon world would look like could be an effective method to overcome resistance to change, if managed tactfully. Ultimately, focusing on positive visions of a low carbon future and increasing public engagement on the issue could enable better acceptance of the need for reconfiguring lives.

This paper has explored how creating narratives of a low carbon future, which is seen as positive and desirable, whilst honing identities, values and status, is perceived by interviewees as a way to increase engagement on the issue. By adopting a narrative approach which translates the complexities of scientific jargon into salient frames, this can create a common base for learning and dialogue, whilst creating the space to connect and discuss what a low carbon future may look like and life within it.
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References


