How do young people engage with climate change?

**Towards more effective communication
with 18-25 year olds**

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About COIN

The Climate Outreach and Information Network (COIN) is a charity focused on building cross-societal acceptance of the need to tackle climate change. We have 10 years of experience helping our partners talk and think about climate change in ways that reflect their individual values, interests and ways of seeing the world. We work with a wide range of organizations including UK government departments, local government, charities, faith organizations and many others.

Acknowledgements

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Introduction

How young people understand and engage with climate change is a critical question. As the generation that will face the reality of a changing climate in their own lifetimes, they are the most vulnerable yet potentially also the best placed (and most motivated) to generate an ambitious societal response that will avoid the most dangerous risks of climate change. Surprisingly, though, there is very little existing research on what young people think about climate change, or the effectiveness of different strategies for engaging this critical audience.

The current project aims to address this gap, through research involving a group of 36 young adults, aged 18-25 currently living in the UK. During May 2014, a series of discussion groups explored participants' values and aspirations as well as their views on climate change and climate policies. The groups also discussed the sorts of voices they trusted to provide accurate and credible information about climate change, and their views on different ways of framing the issue to appeal to a wider range of people.

These 'narrative workshops' – so called because of the central focus on identifying narratives that resonate with particular audiences – aimed to give a voice to the young people participating and allow them to evaluate four climate change 'narratives' through facilitated discussion. Designed to explore possible communication strategies for practitioners looking to engage young people, the narratives represented four broad 'frames' for communicating about climate change. These were developed using evidence from the academic literature, frames, phrases and messaging used by existing organisations and suggestions put forward directly by participants in the initial phase of the project. The aim was not to approve, endorse or 'rubber stamp' a particular set of words or type of language, but rather to use the discussions to shed light on more general principles for communication about climate change with young people.

In this report, we describe the key findings from these narrative workshops and explore the implications for engaging young people more effectively on climate change. We anticipate that the results will be useful for a wide range of climate change communication initiatives undertaken by educationalists, academics, teachers, NGOs and policy makers. These are very different audiences who are likely to have quite different communication and engagement remits. However, we aim to provide guidance that can be drawn on and adapted by a range of different organisations depending on their particular priorities. Before reporting the key findings, we first provide some background to the issue and a review of the existing evidence on how young adults engage with climate change.

Young people and climate change in context

What are the most important issues facing Britain?

Public opinion polls show that unemployment, the NHS and inflation/rising prices cited as the top three challenges facing Britain today, with climate change and energy having moved up these rankings to joint fourth (*see figure 1 below,* DECC, 2014). However, this notable jump in the perceived importance of environmental issues among the public followed a period of intense and widespread flooding, which (at least temporarily) appeared to raise the profile of climate change in the media and political discourse, as well as a high-profile public debate about rising energy prices. In general, it is fair to say that climate change climate has rarely been one of people's 'top priorities' relative to other issues like the economy, health or education in the UK since polling on the topic began nearly 25 years ago (Pidgeon, 2012).

Figure 1: Which of the areas do you feel represents the biggest challenge that Britain is facing today? Results of a DECC public opinion poll conducted in March 2014
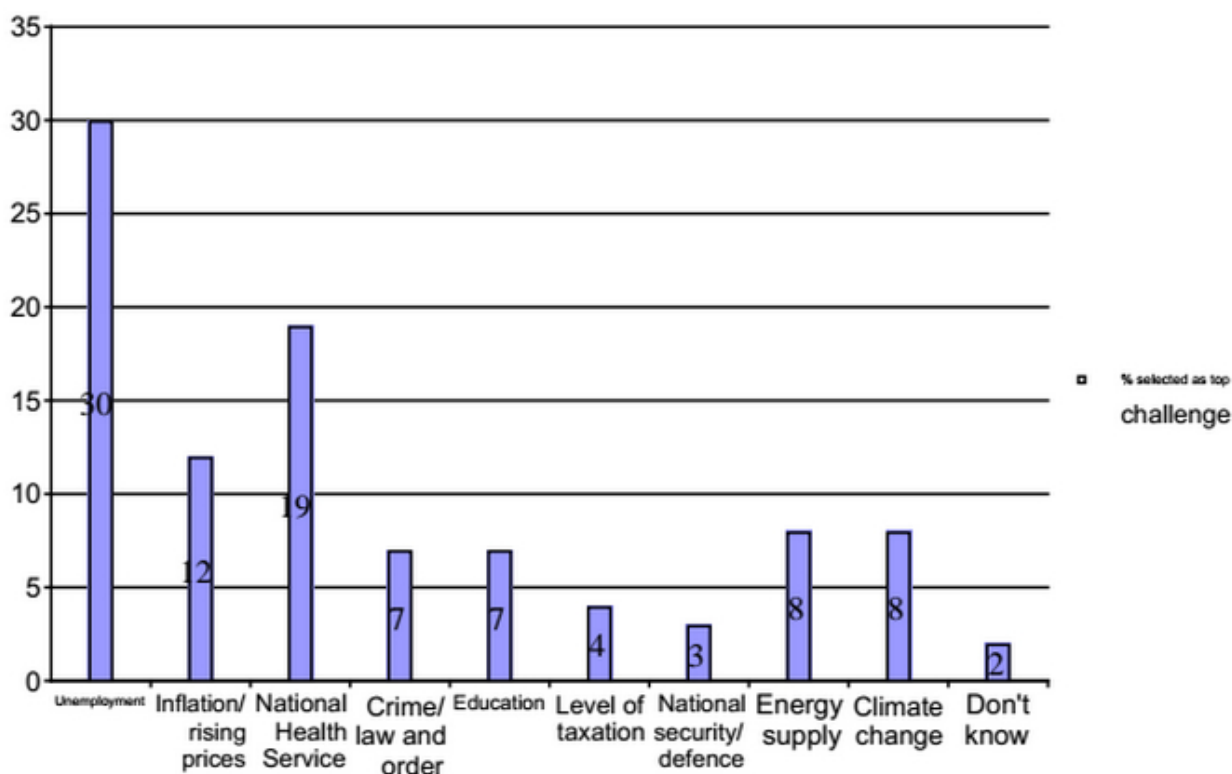
Source: DECC (2014, headline findings)

Youth-specific findings are not generally reported in national polls on public concerns.

However, in a 2012 YouGov survey of 18-24s, the economy was identified as the most important issue facing Britain today, with education, securing a job and being able to buy a home identified as key concerns (Janta-Lipinski and McDonnell, 2012). Similarly, Hibberd and Nguyen (2013) noted a general unease about the future among British 16-26 year olds due to socio-economic concerns about fewer jobs, prospects and opportunities The economic downturn has likely resulted in a re-prioritisation of economic concerns for the public; a particularly pronounced trend for young adults as they seek employment and to establish careers (Jerneck, 2013).

In the context of climate change, it has been argued that people possess a 'finite pool of worry' (Weber, 2010) and that when other (more immediate) concerns are widespread, these tend to take priority. This is the context against which campaigns to engage young people on climate change must be viewed: there are many competing priorities for this age group's attention, as well as concerns and worries that are, in many ways, more immediate than climate change. One particular challenge is the level and extent of political engagement among young people: do young adults have sufficient stake in the political process to feel they can affect policy solutions to climate change (or any other pressing social issue)?

Youth attitudes to political participation

Whilst the majority of the British public continues to engage with the formal political process, according to the latest British Social Attitudes Survey (BSA), '*fewer people have voted in the last three general elections than they ever have in the past*' (BSA, 2013). Reported turnout rates for 2010 were particularly low for young adults, with less than half of 18-24s saying they voted (Ipsos Mori, 2013a). Political participation among young adults has been found to vary with educational level, with those without formal school qualifications exhibiting lower levels of engagement (Ipsos Mori, 2013a). Since the 1980s, public belief in a 'duty to vote' in the UK has declined fastest among 18-24 year-olds who show the lowest levels of belief of any age group in a duty to vote (Ipsos Mori, 2013a). In the same timeframe polls show a gradual increase in the percentage of 18-24s who think it is not worth voting at all (BSA, 2013). In the mid-2000s Park et al. (2004) found that 1 in 5 teenagers viewed voting as a '*waste of time*', although this has fallen slightly since 2010 (BSA, 2013).

Set against this, however, is the consistent finding in surveys of public opinion on climate change that the public expects the government to exhibit leadership on this issue, and that it is primarily something that governments should take responsibility for (Demski et al., 2013; Spence et al., 2010). This is part of what has been termed the 'governance trap' (Pidgeon, 2012) of climate change between the public and politicians. As per wider sampled age groups, 18-24 year olds select '*national governments*' first in their choice of who is '*most responsible for tackling climate change*' (BSA, 2013).

Young people also exhibit lower identification with a particular political party (BSA, 2013,

Ipsos Mori, 2013a). In recent years, Britain has witnessed a decline in the percentage of the general public who associate themselves with a political party. By 2012, 45% of 18-24s said they identified with a political party, compared to 84% of 55-64 year-olds and 88% of over-65s (BSA, 2013). However, two thirds of UK students interviewed in a 2013 study said they were "more likely" to vote for a political party if it pledged to tackle climate change (NUS, 2013). Britons today are more likely than in the 1980s to have engaged in the political process through petition signing or contacting their MP – although those over 30 were more likely to do so than their younger counterparts (BSA, 2013).

Several studies argue that young people are not simply politically apathetic but rather disenchanted and alienated by the formal political process (Harris et al., 2010; Henn et al., 2005). Henn et al. (2005) found that British 18 year-olds supported the democratic process and were concerned about political issues, but were sceptical and turned off by those charged with conducting politics on their behalf – political parties and professional politicians. Both were perceived to be self-serving, unrepresentative and unresponsive to young people. This study found that young people were more likely to engage in 'cause-oriented' or 'micro-politics'. This is backed up by recent polling showing that young adults are turning to alternative forms of political action such as grassroots or community-led projects or volunteering and charitable activities (Ipsos Mori, 2013a). However, several authors have cautioned against seeing this as a uniform shift towards a 'new politics' and assuming that young people are as engaged as ever but simply in new forms of activity (Harris et al., 2010; Henn et al., 2005; Phelps, 2012). Phelps (2012) suggests that there is a distinct generational effect whereby the post-1980s generation (people who voted for the first time between 1992 and 2001) have participatory characteristics related to the political period in which they were socialised (i.e. an especially individualistic era).

The picture that emerges is one in which young people consistently express serious dissatisfaction with the political system, but yet are interested and potentially take an active role in a range of 'political' issues. Climate change must compete with many other concerns such as the economy, employment opportunities and access to affordable education. So how do young people engage with this crucial issue?

Public perceptions of climate change: are young people's views different?

Levels of concern and awareness about climate change rose rapidly during the 1990s and into the 2000s. However, concern, willingness to act personally to mitigate climate change, and acceptance that the climate is changing all declined during the second part of the 2000's (Shuckburgh et al., 2012; Spence et al., 2010). Various (not mutually exclusive) explanations have been suggested for this, including: more immediate economic concerns suppressing worry about longer-term issues like climate change (Scruggs and Benegal, 2012); the natural 'ebb and flow' of public and media attention cycles (Ratter et al, 2012); the potential negative influence of climate science 'controversies' (Shuckburgh et al., 2012); 'climate fatigue' and the influence of localised cold weather seeming to contradict

the idea of global warming (Capstick and Pidgeon, 2014); and the impact of 'elite cues', what is said or not said by politicians and other public figures on climate change (Brulle, 2012; Corner, 2013a). More recent data (DECC, 2014) appear to show that levels of concern and belief in the reality of climate change are once again rising (or at least, not falling further), and that there may have been a boost (albeit potentially a temporary one) in public interest in climate change following the heavy flooding of early 2014 (Marshall, 2014a). If there is one simple message to take from two decades of surveys tracking public opinion on climate change, it is that reasonably high levels of awareness, concern, willingness to engage in low-carbon behaviours and support for government leadership on climate change have been consistently present since the late 1990s (Pidgeon, 2012), even if there are serious question marks over the depth of public engagement with climate change (Rowson, 2013), and it is not one of the nation's top priorities.

Typically, surveys show young people exhibit relatively high levels of reported concern on climate change – interestingly, even in studies that have shown uncertainty among young people in terms of knowledge, levels of concern have tended to be high. For example, a recent NUS (2013) survey of 1000 students found that some 70% of students were either *very concerned* (24%) or *fairly concerned* (46%) about climate change (broadly comparable to levels of concern among the general population). Similarly, in a British Science Association survey (2013), 18-24 year-olds exhibited fairly high levels of concern at 63% (comparable to the national average of 60%), although the 35-44 age range expressed the highest level of concern at 69%. Shuckburgh et al. (2012) noted a similar non-linear relationship reporting a lower rate of concern about climate change among 16-24 year-olds (52%) compared to 35-64 year-olds (70%).

In contrast to the polling data, a recent qualitative study in the UK, based on interviews and focus groups with 16-26 year-olds, revealed a notable lack of concern with respondents reporting feelings of pessimism, disempowerment and inaction in relation to climate change (Hibberd and Nguyen, 2013). There was a widespread perception that climate change did not play any major role in their day-to-day lives, with most reporting that it came very low on their priority list. Reasons cited included a lack of relevance and connection to their everyday lives, a lack of resources in terms of time, money and available infrastructure, as well an absence of shared values and practices to encourage sustainable lifestyles. Sparse and ineffective coverage by the media was also given as a major reason for participants' disengagement with the issue.

There is a well-documented general relationship between increasing age and levels of scepticism (as well as gender and in countries like the US, ethnicity). As a simplified rule-of-thumb, older, white men in anglophile countries are the most likely group to express scepticism about climate change (McCright and Dunlap, 2011; Whitmarsh, 2011). Climate change scepticism is less likely to be found among younger age groups. In the Hibberd and Nguyen (2013) study none of the 16-26 year old Britons contested the anthropogenic causes of climate change.

Less public polling in the UK has explored public attitudes towards climate policy specifically, although a number of surveys have asked about potential energy sources and concerns around energy bills (see for example, Carbon Brief, 2013, DECC 2014). On the whole, the UK public remain relatively favourable towards renewables in principle. 2014 data shows continued public support for renewables, with 80% of the public saying they support their use for providing the UK's electricity, fuel and heat (DECC, 2014). 2013 figures showed highest support for solar energy (87%) followed by wind (82%) and hydro-power (76%) (Ipsos Mori, 2013b). This compares to 39% who said they were *very* or *fairly favourable* towards oil, and 38% for coal (Ipsos Mori, 2013b). Data on young people's perceptions of energy policies is, however, scarce.

Climate change cognition among young people

It has been suggested that the current generation of 18-to-25-year-olds is likely to be the best *informed* about climate change of any in history (Perera and Hewege, 2013), but polls paint a mixed picture. While one survey found that 62% of 18-24 year-olds felt they either knew a *great deal* or *fair amount* about climate change (YouGov, 2013), the majority of surveys indicated lower levels of knowledge. When asked by a BSA survey in 2013 "*how much would you say you know about climate change*", 52% of 18-24 year-olds said they knew either "*a little*" or "*hardly anything*", a figure comparable to other age groups. When asked "*how many degrees Celsius do you think global temperatures need to rise for climate change to become dangerous*?", only 7% of 18-34s sampled chose the 'correct' answer of 2°C, compared to 9% of the British public (Carbon Brief, 2013). Hibberd and Nguyen (2013) found that, while their sample group of 16-26 year old Britons were aware of climate change and could broadly define the term, they showed an uneven knowledge of key events and concepts.

Nevertheless, the same opinion surveys record some awareness of climate impacts among young people and a high degree of recognition that climate change is happening 'now'. 47% of 18-24 year-olds cited *"changing global climate"* as an impact (BSA, 2013). An NUS (2013) survey found 61% of students believe the UK is *"already experiencing"* the effects of climate change, while a YouGov (2013) poll recorded 43% of 18-24s agreeing with the statement "*we are seeing the effects of man-made climate change in recent extreme weather events*". 55% of 18-24s polled by YouGov in 2014 - the largest percentage of any age group - agreed with the statement that recent flooding in the UK was the result of climate change. However, young adults still view climate change as primarily affecting the developing world and 'far away' places (Perera and Hewege, 2013). In one survey, 57% of 18-24 year olds identified melting polar ice caps as the primary consequence of climate change (BSA, 2013).

For young adults and the general public alike, there remains confusion around basic underlying scientific concepts, for example, a tendency to confuse damage to the ozone layer with climate change, (Schreiner et al., 2005) or making inaccurate causal links between short-term weather and long-term climate change (Lombardi and Sinatra, 2010).

Young adults also tend to underestimate the level of consensus that exists among the scientific community on climate change (British Science Association, 2013; Friedman, 2013; Perera and Hewege, 2013; Sterman, 2011), although the disparity may be somewhat less than in the general population (Carbon Brief, 2013; Maibach et al., 2014). While confusion about the underlying science of climate change is a concern for educators, as we discuss in the next section, studies consistently show that people's level of scientific literacy is not the primary determinant of their views about climate change (Kahan et al., 2012).

Communicating climate change

The question of how to effectively communicate climate change and engage the general public is now the subject of a large amount of academic and 'practitioner' literature. Here, we summarise some of the key findings and indicate where there is youth-specific evidence available.

The importance of values and framing

One factor in particular has proven important in how climate change messages are framed: the different *values* that people hold (Corner et al., 2014) and how messages can be framed to speak more effectively to them. Through a programme of research that has spanned several decades, 44 nations and over 25,000 respondents (for a recent overview see Schwartz et al., 2013), there is now a very robust body of evidence which shows that people have a range of values and may draw on different ones at different times, but certain types of values cluster together (while others conflict with each other). In particular, 'self-enhancing' values like wealth, status and power conflict with 'self-transcending' values like altruism and concern for the welfare of others. Promoting or 'priming' one type of value (e.g., by talking about the economic rationale for energy saving – a self-enhancing value) is likely to inhibit or weaken the prominence of competing values. There is a 'value-action gap', but this does not undermine the importance of values in determining general behavioural tendencies. That is – although any one person at any one time may not act in line with their values, their values are still an important guide to predicting their behaviour across different situations (Crompton 2010; Maio, 2012).

This academic research on values has been applied in a range of ways. For example, the 'Common Cause' approach (Crompton, 2010) argues that substantive public engagement on 'bigger than self' issues like climate change can only be meaningfully achieved if the self-transcendent values that people hold are targeted and activated in climate change campaigns. Chris Rose and Pat Dade use Schwartz's values in a somewhat different way, drawing on them as one part of a 'segmentation' system that categorises people into three broad groups based on their values and motivations (Rose, 2011). According to their 'Values Modes' model, people are either *Pioneers* (people who strongly support principles such as creativity, self-direction, protecting the environment and living ethically),

Prospectors (people who are favourable towards ambition, hedonism and personal achievement) or *Settlers* (people characterised as favourable towards loyalty, taking control, doing one's duty and standing up for friends and family). Whereas the 'Common Cause' approach advocates finding the self-transcendent motivations that all people possess to some extent (Chilton, 2012), the 'Values Modes' approach suggests targeting the three different population groups by using messages that appeal to their primary motivations (so, for example, security-driven concerns for *Settlers*, or social-justice based messages for *Pioneers*).

A recent review (Corner et al., 2014) of the role of values in public engagement with climate change concluded that self-transcendent values are strongly predictive of positive engagement with climate change whereas self-enhancing values are not. It is possible to think about self-transcending values as the 'values of a more sustainable society', and to ask how messages about climate change might be 'framed' in order to nurture and support these values. Intentionally or unintentionally, all information is 'framed' by the context in which it appears. For example, putting a financial value on an endangered species and building an economic case for their conservation is a very different frame to one that attempts to achieve the same conservation goals through emphasising the intrinsic value of rare animal species as something that should be protected in their own right.

*A*ny message can be 'framed' in multiple ways, and unsurprisingly, research has found that values-based framing matters for public engagement. A recent UK study looked at the different impacts of framing a sustainable behaviour – car-sharing – in terms of environmental benefits or financial gain. The people who had been presented with environmental reasons for car-sharing were subsequently more likely to engage in other sustainable behaviours (Evans et al., 2013). For people with conservative political views, studies have shown that framing climate change with reference to policies that are more congruent with their view of the world (e.g., by talking about nuclear power and free-market solutions) can reduce levels of scepticism (Feinberg and Miller, 2012; Kahan, 2012; Mocker, 2012). A recent project conducted on behalf of the Welsh government to engage the Welsh public around sustainable development found that people from a range of different backgrounds - including conservative, deprived and disempowered groups that are often disregarded by conventional messaging – responded positively to climate mitigation when it was framed as an issue of national pride, focusing on people's intrinsic sense of belonging and empathy (Marshall, 2014b). Recent COIN projects and publications have also pointed to ways of framing climate change that may resonate with the values of different audiences (Corner, 2013a, 2013b).

There is only limited evidence on how young people's values interact with their engagement with climate change. Nevertheless, of the research that exists, several studies recommend that audience diversity and different cultural values are taken into account when designing narratives and messaging to ensure they sufficiently resonate with young people's, often strongly held, values (Hibberd and Nguyen, 2013; Leiserowitz, 2006). Some studies have suggested that young people tend to put self-enhancing values

like 'comfort and luxury' above other more altruistic values when considering pro-environmental behaviour choices (Boyes et al., 2009; Littich, 2012; Schneekloth and Albert, 2011; Zimmer and Draeger, 2009) The authors of a Finnish study suggest, that although young people are environmentally aware they lack 'post-materialistic' values and that consequently only a small minority has developed a 'genuinely green lifestyle' (Autio, 2004).

While it is clear that the way messages about climate change are framed is crucial, there remains a lack of large-scale empirical evidence in this area. In many ways, it is easier to point to messages and approaches to avoid than it is to identify frames that will be likely to succeed. Of the research that has been done, several messages and approaches to avoid have been identified. Here we review the most important ones.

Accurate information is insufficient for engagement

The shortcomings of engagement strategies focused on information dissemination alone are now widely recognised, and the notion that simply telling the public about the scientific evidence for climate change will be sufficient to increase engagement or overcome scepticism is no longer credited (Cook and Lewandowsky, 2011; Moser and Dilling, 2007; Sheppard, 2012; Sterman, 2011; Whitmarsh et al., 2013). However, some studies have suggested that increasing public awareness of the level of scientific consensus on climate change enhances concern (Lewandowsky et al., 2012), and that if the scientific consensus is communicated using graphic methods such as a pie-chart, this information is likely to be especially impactful (van der Linden et al., 2014).

As is the case in the general population, being informed about climate change is not, on its own, sufficient to engage young people on climate change. Several studies of young adults show that knowledge and awareness of the issue does not necessarily translate into active engagement (Boyes et al., 2009; Djikstra and Goedhardt, 2012). This has been variously termed the 'knowledge-action gap' or 'awareness-action gap' (Brandtner, 2012; Kollmuss and Agyeman, 2002; Meinhold and Malkus, 2005). Even where young people acknowledge climate change is occurring, some still do not see themselves as having a role to play in mitigating the process (Markowitz, 2012). Hibberd and Nguyen (2013) found that despite being informed about climate change, only a minority of their 16-26 cohort were actively involved in climate campaigns in the UK and few had had any engagement with climate change before participating in the research. Research from several different countries indicates that young people tend to engage in 'minimal inconvenience' behaviours, such as switching the lights off or recycling (Autio, 2004; Littich, 2012; Schneekloth and Albert, 2011; Zimmer and Draeger, 2009), even when they are aware that more inconvenient behavioural changes (such as using public transport instead of private vehicles) or more political, public actions (such as protesting or bringing pressure to bear on policy makers) are likely to be more effective (Boyes et al., 2009; Kenis and Mathijs, 2012).

Psychological distance

One key consideration is the 'psychological distance' between climate change and the public (Weber, 2010). Typically, people in countries like the UK do not physically experience climate change and even when climate-related impacts are encountered, they may not lead directly to greater concern about climate change (Marshall, 2014a). Climate change is an abstract risk for most people, most of the time. Pidgeon and Fischoff (2012) suggest that the more the risks of climate change can be brought to life through vivid 'mental models' (e.g. practical examples of the risks of sea level rise), the more likely it is that people will respond to climate risks in a proactive way.

Recent practitioner debates in the UK have focused on ways of making climate change more salient by demonstrating the ways in which climate change will affect the 'things people love' (Corner and Roberts, 2014). While 'local' messaging may help make audiences more receptive to information, it is currently not clear whether or not it will change attitudes towards climate change over the longer term (Scannell and Gifford, 2011), or in fact whether piquing 'local' interest in climate change translates to 'global' concern about the issue (Spence and Pidgeon, 2010). Some commentators suggest health frames are likely to be useful for engagement as they connect climate change to health problems which are already familiar and more personally relevant to people (Maibach et al., 2010, 2011, 2014; Mocker, 2012; Myers et al., 2012; Nisbet, 2009).

As the general discourse on climate change has grown increasingly pessimistic (Schreiner et al., 2005), youth action and engagement with the issue has, to some extent, been inhibited (Kagawa, 2007). Bridging the 'psychological distance' between young people and climate change appears particularly important in this regard as it contributes towards increasing perceptions of self-efficacy (i.e., the willingness and capacity to respond to climate change, sometimes termed an 'internal locus of control'), a key determinant of pro-environmental behaviour change among young people (Fielding and Head, 2012; Levy and Zint, 2013; Mead et al., 2012; Payne, 2005; Wibeck, 2014). Research demonstrates that young people are more likely to understand, care and act on climate change if they can engage with it experientially, through some form of educational, outreach or social activity. (Bone et al, 2011; Chawla, 2009; Hsu, 2010; Ojala, 2011; Senbel et al, 2014; Kagawa, 2007), suggesting this may be a particularly effective way to bridge the psychological distance between young people and climate change.

Hibberd and Nguyen (2013) found that the UK media and major communication campaigns were failing to actively engage young adults because of a lack of positive and relevant messages and frames. They recommended using more immediate angles on the issue, stressing the socio-economic impacts on humans with less emphasis on the science and physical impacts in far off places; focusing on day-to-day solutions that young people can relate to themselves or their own community; and emphasising the clear benefits of adopting climate friendly lifestyles.

Fear and guilt-based messages

Early campaigns to engage the public used the fear of catastrophic climate impacts to attempt to motivate concern. However, whilst fear and alarmism may be attention grabbing in the short-term, empirical testing has shown limited long-term effects, and even counterproductive effects, if a threat is not perceived as personally relevant or direct (Hoog et al., 2005; Howell, 2011; Lowe et al., 2006; O'Neill and Nicolson-Cole, 2009). One study concluded that the media and other major communication formats, such as campaigns, have tended to hinder rather than help young adults engage with climate change by focusing too much on extreme events, alarmism, guilt and fear messaging, which risks 'disengaging, desensitizing and even antagonising young people' (Hibberd and Nguyen, 2013). As Signit and Eriaut (2006, 2007) point out alarmist portrayals of climate change as an immense and terrible threat beyond human control undercuts people's sense of self-efficacy, and when juxtaposed against the 'small actions' narrative, can be almost comedic - 'avoid the apocalypse by switching to low-energy light bulbs'.

One study of UK students found that young British adults responded better to a message about UK climate change policy that was framed using a positive comparison with a less-progressive nation, rather than 'naming and shaming' the UK as underperforming compared to other countries - again underscoring the finding that guilt is not an especially useful emotion for catalysing engagement with climate change (Rabinovich et al., 2011).

Uncertainty and risk

Another major topic of interest among climate change communication scholars and practitioners is the question of how to communicate uncertainty. Like any complex area of science, uncertainty is an inherent part of climate change but it is also a concept that many members of the public equate with 'ignorance' (Corner et al., 2012). Recommendations for communicating uncertainty effectively have tended to focus on the need to state what is *known* prior to what is *unknown*, and to focus on the concept of 'risk' rather than uncertainty, which people are generally more familiar with as the language of the insurance, health and national security sector (Painter, 2013; Pidgeon and Fischhoff, 2011; Signit and Eriaut, 2007). However, no work has been conducted with young people specifically exploring the concepts of climate risk and uncertainty.

Messengers and communications sources

Among the general population, scientists continue to be perceived as highly trusted messengers on climate change (Pidgeon, 2012), and although there is an expectation that government should lead on climate change, there is generally very low trust in politicians (matched by similarly low levels of trust in the media). Several studies point to the effectiveness of peer-to-peer interaction and communication around climate change as a way of making climate-friendly behaviours feel normal, natural and right – 'the kinds of

things that people like us do' (Mead et al., 2012; Signit and Eriaut, 2006; Wibeck, 2014). These trends are reflected in several studies which point to the effectiveness of peer-to-peer interaction and communication around climate change as an effective engagement strategy (Bone et al., 2012; Hibberd and Nguyen, 2013; Kagawa, 2007). Senbel et al. (2014) found that students sharing their experiences/lessons of a climate campaign (particularly via social media) proved a better recruitment tool than informational advocacy (i.e. posters).

By contrast, activities seen as designed by large or 'corporate' organisations are less likely to meaningfully resonate with young adults, and are less likely to maintain a long-term hold (Percy-Smith and Burns, 2012). It is unsurprising, then, that some of the best-known youth-focused climate change organisations are either entirely youth-driven (e.g. UK Youth Climate Coalition), or, when obviously 'corporatized', encourage youth participation through forums such as international competitions (e.g. Connect 4 Climate). Besides youth driven communications, teachers and lecturers rank highly in the list of messengers successfully facilitating climate awareness among young people (Arnold et al., 2009).

The role of celebrities as messengers for climate action is a source of some controversy (Anderson, 2009; Boykoff, 2009). While it is true that many young people are drawn to celebrity culture, the efficacy of celebrities as climate change messengers has not been well researched. Researchers caution that the popularity, credibility and trustworthiness of a celebrity needs to be well considered before involving them in climate campaigns (Anderson, 2009; Boykoff, 2009). Hibberd and Nguyen (2013) found that while some 16-26 year olds in a British study felt that celebrity involvement was a good way to raise the issue's profile, more felt it was inappropriate due to their questionable legitimacy in terms of high carbon lifestyles and relevant expertise.

The current research

The previous section shows that there is an emerging evidence-base on how young people engage with climate change. However, there are still major gaps in terms of understanding the sorts of messages, language and narratives that are likely to resonate with young people, and in particular young people with different values and social views. The purpose of the current research was, therefore, to begin to fill this gap by testing a set of narratives for communicating climate change with a sample of 36 young people aged 18-25. In addition, the research hoped to explore whether a group of young people who could be characterised as *Pioneers* in the language of the 'Values Modes' approach would differ in their views and communications preferences to young people with different values and motivations.

Method and Design

During May 2014, in London and Oxford, a series of discussion groups explored participants' views on climate change and climate policies and a set of four 'narratives' about climate change. 36 young adults living in the UK participated in the research. 19 were British and 17 were non-British nationals[1]. The majority were students (29), mainly post-graduates. Nearly half the group expressed a strong commitment to the environment, having either studied a related subject and/or been involved in green campaigning.

Using a questionnaire designed to capture the significant overlap between Schwartz's (1992) 'circumplex' model of universal human values and Rose's (2011) 'values modes' method for segmenting audiences, participants were specifically recruited to reflect different underlying values-based orientations. Schwartz's (1992) categorisation of values into 'self-transcending' (universalism, benevolence, self-direction), 'self-enhancing' (achievement, power), 'open to experience' (stimulation, hedonism) and 'conservation' (conformity, tradition and security) were overlaid with the three 'values modes' profiles – *Pioneer, Prospector and Settler* (Rose, 2011). *Pioneers* are people who strongly support principles such as creativity, self-direction, protecting the environment and living ethically. *Prospectors* are characterised as favourable towards ambition, hedonism and personal achievement, while *Settlers* are characterised as favourable towards loyalty, taking control, doing one's duty and standing up for friends and family.

Participants were then asked to indicate the extent to which the resulting 12 values (e.g. protecting the environment (self-transcendent/pioneer) were an important guiding principle in their lives (see Appendix 1 for a full explanation of the methodology). Based on the results, two of the four groups were made up solely of *Pioneers*, with the remaining two groups partly comprising *Pioneers* and partly *Settlers* and *Prospectors.* The three most popular values were mostly 'self-transcendent' items, including 'Enjoying Life', 'Social Justice' and 'Responsibility', with 'Protecting the Environment the fourth most popular value. The least popular values were mostly self-enhancing: 'Wealth', 'Authority' and 'Respect for Tradition'

As part of the recruitment process, a special 'event' homepage advertising the workshops was created on the COIN website and mail shots were sent out to target organisations and networks. Social media channels such as twitter, Facebook and Linked-In were also utilised and promotional leaflets were distributed at relevant events in London and Oxford. Participants were all provided with a modest financial incentive.

Pioneers were recruited by approaching youth-run or focused organisations attractive to this profile. These included: climate change NGOs such as the UK Youth Climate Coalition (UKYCC), People and Planet and Young Friends of the Earth; groups with a broader

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1   Including from Sweden, France, Portugal, Belgium, Switzerland, Germany, Russia, Indonesia, Hong Kong, China, Vietnam the USA and Canada.

mandate such as UK Young Ambassadors, the British Youth Council, Raleigh International and the Prince's Trust; as well as the NUS and individual student unions and societies from British universities such as Oxford, the LSE and UCL. In order to recruit mixed groups, representing all three categories, the net was widened to include youth club and volunteering networks such as UK Youth, Restless Development, the National Council for Volunteering Services and vInspire.

With the support of the Grantham Institute, the workshops were conducted in two separate phases, held a fortnight apart:

Phase 1 employed a 'funnel' design, where participants first discussed their shared values and sense of identity, their hopes for the future and their aspirations. The topic of climate change was then introduced through this lens in order to explore how a group's values and worldviews affect their attitudes and beliefs about climate change.

Phase 2 used facilitated discussion to evaluate four different narratives, compiled to gather feedback on words, phrases and frames on climate change. These drew on the views that participants expressed in Phase 1 and the existing literature on how young people engage with climate change:

Narrative 1: 'The things we love' taking action on climate change means protecting the 'things people love'.

Narrative 2: 'Consensus and misinformation' there is a consensus on climate change, but also a great deal of misinformation.

Narrative 3: 'Climate change is here and now' that climate change is a current (rather than future) threat.

Narrative 4: 'Climate change is a moral issue' that climate change requires a moral duty to act.

Finally, participants were asked to write their own narratives either independently or building on the preceding four narratives, to help draw out which elements were most favoured by young adults for communicating to their peers. In the next section we describe the key findings from Phase 1 and Phase 2 of the research, before providing key conclusions and recommendations for future engagement with this audience on climate change.

Phase 1: Key findings

Understanding the audience: the context for views about climate change

In keeping with previous COIN research with diverse audiences (Corner and Roberts, 2014), there was a remarkable consistency in the values that people deemed to be important across both the *Pioneer* and *Mixed* groups (see Figure 1).

When asked what qualities they admired in a person, the most popular answer was *honesty*, with closely related principles such as empathy, trust, fairness and compassion also attracting support. In both sets of groups, there was an appreciation for openness and a sense that others' opinions ought to be respected even if they were different from an individual's own views. In terms of relating the values identified as important by participants to the Schwartz (1992) model that motivated these questions, the options selected were overwhelmingly 'self-transcendent' (contrasting with some prior evidence that young people prioritise self-enhancing values – e.g., Boyes et al., 2009). The *Pioneer* groups suggested that 'conviction' and a sense of balance between 'emotion and rationality' was also important. The *Mixed* groups identified ambition (a 'self-enhancing' value) and creativity (an 'openness to experience' value) as important. Respect for others' views could be considered both a self-transcendent and open-to-experience value.
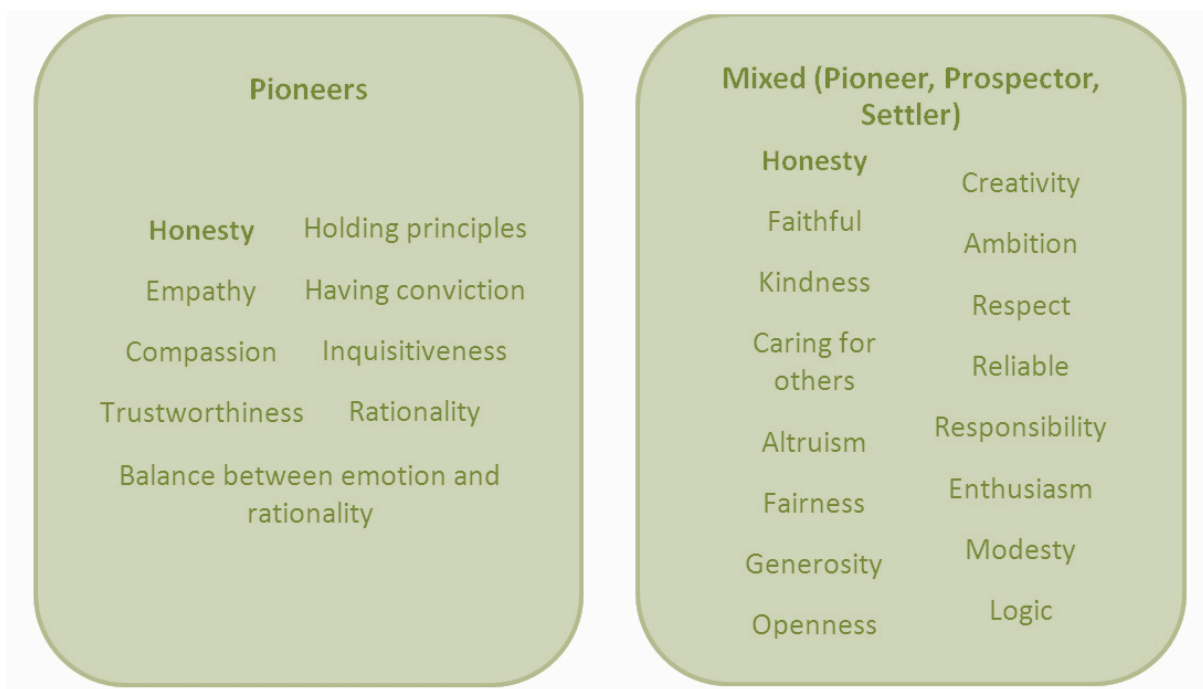

Figure 2: Values and traits that participants identified as important

However, while these traits were held to be important and admirable, there was a strong sense across both sets of groups that they were not widely shared in society. Some

suggested that they were aspirations that people found it difficult to live up to, while others argued that society does not reward these traits, or that a small minority who did not wish to uphold them had created a culture of distrust. Politicians – and the expenses scandal – were singled out by one of the *Pioneer* groups as embodying this concern.

The groups were of course, all linked by their age group. However, while concerns particular to young people (such as the difficulty of finding employment, the cost of education, and the lack of representation for under-25s in government) were often mentioned, there was not a strong sense of 'identity' among any of the groups – as 'young people' or any other easily identifiable group. One of the *Pioneer* groups suggested that there is an increasingly fluid, international sense of identity among younger generations, and that this stands in contrast to the rise of nationalistic views in the UK (embodied, for example, by the rise of the UK Independence Party).

When asked specifically about engagement with the political process, there was an emphatic lack of trust and identification with mainstream political parties. Very few people across any of the groups felt well represented by mainstream politics or that there was any real choice between parties. For example, comments by participants in the *Pioneer* groups included:

> *"I don't feel there is a party that fully represents me."*

> *"There isn't much choice I don't think."*

> *"There isn't much honesty to what they are saying."*

While comments from participants in the *Mixed* groups included:

> *"I have never joined any political party as I have never felt politically represented. I feel betrayed."*

> *"There isn't anyone that stands out as representative of our generation."*

> *"There needs to be a major overhaul in politics. It's all quite dark and seedy. You never really know what's going on. I think it needs to be a bit more transparent."*

There was also a strong sense of disillusionment with manifesto promises, which were seen as too easily broken and meaningless. One participant from the *Mixed* groups commented that:

> *"When you're not in power you talk the talk but when you get in power you're more into the general picture and prioritise economic concerns than perhaps more idealistic concerns. How is it possible to be part of the system without being changed by the system?"*

To a large extent this was reflected in participants' attitudes to voting with high levels of apathy and several (in the *Pioneer* groups) stating that there was no point in exercising their franchise:

> "*I used to be quite political, I wasn't a member, but I followed a political party and now, if there was a general election, I probably wouldn't bother going out to vote and that upsets me…my attitude is it's a waste of my time really.*"

> "*What's really the point in voting if they're just going to lie? You don't know what you're voting for do you? Is there really any point? They'll turn out to be a bunch of liars anyway.*"

> "*I don't see why every time it comes round to another vote, everyone thinks 'oh yeah, things are going to be different.*"

However, several participants in both *Mixed* and *Pioneer* groups felt that voting was the only way of holding politicians to account and a way to start the process of bringing about societal change:

> "*We should fight to make voting matter, that's the whole point.*" (Pioneer)

> "*I mean, even if voting's not perfect, as it is at the moment, it still makes them a bit more accountable.*" (Pioneer)

> "*There's a reform that needs to happen, but I don't think it's by people abandoning the vote and showing apathy to that.*" (*Mixed*)

About a third of participants claimed some current or past involvement in specific campaigns for social change, with one participant in the *Mixed* group feeling that this was a more tangible alternative to engaging in the political system:

> "*To do volunteering as I do, I think is political.*"

However, only around a third of participants said they were actively involved in specific campaigns for social change (beyond petition-signing). One member of the *Mixed* groups commented:

> "*Firstly, we have consumption now so we don't get involved in the political process or in activism. Secondly, everyone is very, very busy and stressed and we don't have time or intellectual space to think about other things like politics or charity work.*"

Nevertheless, it would not be accurate to say that participants in the narrative workshops

were un-interested in politics. When asked to reflect on the 'big issues' they saw as facing society, and their hopes for the future, a common concern across groups was the rise of inequality (nationally and globally) and the social injustice this entailed – "*I think inequality is at the root of all the issues we're discussing*" - as well as the prominence of individualism in society, the difficulty of accessing affordable education and poor job prospects. One of the *Mixed* groups specifically pointed to political disengagement as the primary challenge facing society (especially among young people). The erosion (and need for protection) of human rights was cited by one of the *Mixed* groups as a significant concern:

> "*Human rights are a big issue and political instability in the countries where human rights is very low.*"

In terms of the voices and societal actors that participants viewed as trustworthy, there was a strong general distrust of mainstream media outlets – with the exception of the BBC and to a lesser extent *The Guardian* – and a firm preference across both sets of groups for accessing news, information and opinion online and through social media. One of the *Pioneer* groups described mainstream media as corrupted by corporate advertising. A participant in the *Mixed* groups and several pioneers suggested that using multiple media sources is a good way to ensure the reliability of information. Friends and family and smaller charities were cited as more reliable sources of information.

Views about climate change

Climate change was mentioned spontaneously in both of the *Mixed* groups and one of the *Pioneer* groups (where it was described as a particular concern for young people and a huge governance challenge in view of the short term nature of political cycles):

> "*There's a bit of anger from all sections of society, but the youth especially …climate change is certainly one of the things that young people want to be discussed a lot more, and more action needs to be distilled from that.*"

In the *Mixed* groups, the focus was on a hope that environmental 'consciousness', investment in clean energy and nurturing a sense of collaborative effort would be a feature of future societies:

> "*I hope the world will be more fair and conscious of ecology and environment, not because they have to but because everybody is aware of the problems.*"

> "*I hope that we'll have prevented disastrous climate change. I hope the world will be better as this is the only way we can continue. Once we work out that we can't go on with no responsibility, just with responsibility as a consumer. It's a very individualistic society. When we realise this doesn't work and that people are unhappy we will change that and have a bit more community.*"

"I'd like to see a future where we have cleaner energy."

There was a fairly even split between those who expressed optimism about the future and those who expressed fear, suggesting that a world with a changed climate would also be a world with changed values. Participants in both the *Mixed* and the *Pioneer* groups expressed concern about the world they would leave to their own children:

"I'm scared of what the future will hold."

"I feel like I'm going to have to fight for [the values] I received [from my parents] and what I want to keep giving to my kids because it is very individualistic these days. I truly hope that it's not going to be the case and people will realise that it's not working and change that but I'm actually very, very scared of the future, especially for my children because I have no idea what it's going to be like. The values are going to be very different; the climate is going to be very different."

When participants were specifically asked for their first response or reaction to the term 'climate change', an interesting range of responses were observed. The *Pioneer* groups described it as "*scary*" and "*genuinely quite terrifying*" insisting that "*something needs to be done*":

"It's worrying. When we did it in school, it's those predictions that the whole world could end up flooding if the polar ice-caps do melt…It's quite worrying to think we could still be alive when this happens, this is kind of in the immediate future really."

While acknowledging uncertainty and some trepidation about the impacts of climate change, they described it as a "*self-evident fact*", and pointed to changing weather patterns and melting polar ice caps as evidence it was already happening. The *Mixed* groups described it as the "*biggest issue facing mankind*" with a sense of hopelessness and inevitability expressed through a long list of impending impacts – melting ice caps, rising sea levels, loss of agricultural land, the scarcity of fresh water, migration, the northward advance of tropical diseases and polar bears stranded on icebergs – and the extreme weather events already occurring in many countries. Only a couple of participants – from both the *Pioneer and Mixed* groups – expressed any doubts about the seriousness of the problem, with the majority of people suggesting that society has yet to grasp the urgency of the problem. This would seem to support the trend observed in previous studies for a lower prevalence of climate change scepticism among this age group. Several *Pioneers* commented:

"It's definitely happening now. When you think about it, maybe you haven't experienced it <u>yet,</u> but you <u>will</u> experience it in some way in the next 50 years, and maybe even sooner than that because we are reaching a tipping point, all these things are gradually adding up."

> *"Since we were born we have heard about the bad effects of climate change. I think we are more aware of this than the older generation."*

In terms of UK impacts, the groups took place not long after major flooding occurred in the UK (during early 2014). About half of the participants in both groups strongly linked the floods to climate change, while a few expressed caution interpreting weather events such as these as evidence of a changing climate. One participant from the *Mixed* groups commented:

> *"I didn't make the connection with climate change and I don't know how much different it is from floods in the past."*

Despite this, there was a strong sense that one 'barrier' to wider engagement with climate change was the lack of 'signs' of climate change (such as extreme weather) in the UK. One participant from a *Pioneer* group noted the consequences in Britain would not be as bad as elsewhere:

> *"Actually in the UK, we'll be fairly protected relative to the rest of the world."*

A recurring theme across groups was that climate change needed to become more personally relevant to people's lives in the UK:

> *"You <u>have</u> to make it relevant…it's so far away, it's a very difficult thing for people to grasp. If you make it more tangible and start at that community level…"*

> *"It's about making it accessible, something people can unify over."*

> *"It's humanising it I guess and making sure it's relevant."*

> *"When people don't act on climate change, it's because they don't know how it affects their lives directly."*

> *"Except for natural disaster, it's really quite hard to relate the impact of climate change to people's life."*

Of note when discussing impacts in the *Mixed* groups was a tendency to confuse the adverse effects of climate change with other types of environmental degradation – damage to the ozone layer, the effects of deep sea trawling on marine ecology – natural disasters or the effects of localised pollution:

> *"I normally think about the effects on the weather – more earthquakes, tsunamis, natural disasters – that's what I think is going to happen in the future…more extreme weather events."*

"I think of the health impacts of more pollution – more cancer and diseases."

When asked who (or which institutions) ought to be responsible for responding to climate change, a common response across both sets of groups was that 'everyone' had a responsibility, but that Western (and wealthier) nations more than developing countries, and older people more than the young, should take more of the burden. A participant in the *Mixed* groups said:

"Our parents would go on about turning the lights off because you're killing the polar bears. Their generation helped muck it up as well and they go on at our generation to deal with it so I think it should be more of a collective effort, more than that future generations should deal with it."
"Everyone is responsible but maybe not to the same degree. Those countries that have more resources such as the developed nations…they have more of a responsibility than those that don't have the resources."

As is common in surveys of public opinion (e.g., Spence et al., 2010), there was a feeling across both sets of groups that the government (more than individuals) should lead on society's response to climate change:

"Politics does play an important role simply because they have the power and they have the most influence on decision-making. It's important that they are the first ones to act."

"They have a very big responsibility because people generally listen to politicians who are high up. So, if they're acting in a certain way then the rest of the country is going to listen."

"I would say it's very important for [politicians] to get involved. Politicians write all the tax and legislation surrounding it and it's important to make sure they're making sure their countries involved for the betterment of their own country."

However, this expectation was tempered by a widespread lack of trust in political parties, cynicism about the short-term goals of politicians and the sense that economic concerns were placed above environmental ones. Several participants in the *Mixed* groups stated:

"For me you can't rely on the government as politics is very short-term."

"I think the Government should take more care but it's not the priority, they prefer to work on the economy."

"There is always some other focus that politics has other than the climate. As soon as the politicians decide to do something then that's going to happen."

Across both sets of groups it was generally felt that although individual actions were not an appropriate response to a challenge as substantial as climate change, everyone needed to get involved to build public support:

> "*I think it comes down to individuals. Everyone needs to do it. If the politicians are on board, then they're just a tiny minority. Everyone in the country has to back them, because otherwise it's not going to make a change.*"

> "*We all have to do something about it relatively soon if we want not to have a bunch of climate refugees coming in. I mean, you complain about, immigration now, like… you have no idea, seriously.*"

> "*It's fair to say everyone is responsible…unless we get everyone on board nothing is going to change.*"

'Grassroots' initiatives (i.e., campaigns led by ordinary people) were seen as a more tangible, effective way of affecting change than engaging in the formal political process. However, there was also a sense that (linked to the earlier discussion of values in society) people might be too focused on economic concerns or their self-interest to pursue options like these, and that most people were not well-informed on the issue. When asked what sort of policies the government should be pursuing to tackle climate change, support for (and investment in) renewable energy technologies was discussed by all groups. Yet, knowledge about specific policy options being pursued by the UK government was generally low (a point we return to in the analysis of Phase 2 results). *Pioneers* saw the vested interests of the fossil fuel industry as a barrier to effective policies and perceived a lack of urgency compared to an issue like the economy (although it was also suggested that making the economic case for climate change was important). One *Pioneer* group discussed linking climate change to the things that they (and their friends) cared about, as well as creating pride in community-level renewable energy projects:

> "*We have to make them care, see examples right on their doorstep, because that's the only way it will hit home really.*"

Few participants felt that the mainstream political parties were taking climate change seriously enough, and several commented that the Coalition Government appeared to have reneged on its early promises about being the 'greenest government ever'. Similarly, there was a widespread perception that the media do not give adequate coverage to climate change (in comparison to issues like the economy) and that 'mixed messages' on climate change came from the media in terms of how serious the issue was. One participant felt that the claims of scientists were exaggerated by the media (but more felt they were not taken seriously enough). Illustrating the significant dominance of social media over traditional news outlets, one participant in the *Mixed* groups commented:

"When you see things on climate change in the mainstream news, it's not like, oh that's interesting, it's like oh finally that's reached the news. It's not your source of news if you have any interest in it."

In fact, a theme that repeated throughout Phase 1, mirroring previous research, was that friends, family and scientists were likely to be more trusted sources than politicians or the media (on climate change or any other issue). A few participants in the *Mixed* groups said that parents were an important influence:

"I'd probably trust a scientist more than a politician just because being a scientist makes them seem more informed, almost cleverer in that specific subject, whereas a politician isn't specialised in the subject they're talking about. They could just be making a general statement. You trust a scientist a bit more because that's their chosen field of expertise. Some journalists are just there to make money and write what they want because it sells."

"I think it is the way our parents bring us up. Upbringing is a very important factor…Parents are the key influence."

"It's very important for parents to bring up children in a certain way with a certain mind set."

"My mother was in environmental agriculture so I grew up with that influence, so yes, I would start a conversation about climate change with any friend."

With the exception of the BBC (which many participants identified as a reliable source of information on climate change), peer-networks using social media were considered more reliable than the mainstream media:

"Most of the news I trust comes from social networks. I know who it's coming from and I trust them. For the news I'm trying to read many newspapers because I know there is a political party behind it so I try to be fair and get the information from everywhere."

While one group of *Pioneers* felt that climate change was discussed "*more than people thought*" by young adults, others, particularly in the *Mixed* groups, suggested that the popularity of climate change as a topic of discussion very much depended on which sort of people you spoke to:

"Unless I'm with friends who are environmentally active, I would avoid bringing up environmental issues as it just creates this 'other'… that I'm trying to change your mind."

"It really depends on who I'm talking to…I do have just a few friends who are a little

more environmentally aware so it makes sense to bring up that sort of topic with them."

"Do I speak about the environment with everybody? I don't because I'm really afraid they're going to say the sentence that makes me really angry, 'oh global warming, oh really, it's really cold today.' I don't feel like talking to the people in this very clichéd, simplistic way. So it's difficult to speak to people about that as you don't want them to feel bad or yourself to feel bad about what they say."

Going even further, several participants in the *Mixed* groups suggested that talking about climate change was almost taboo:

"It's like religion, it's not something I really talk about… it seems like people don't feel like talking about it."

"If you start talking about it [climate change] people just lose interest straight away. They don't want to know, they want to talk about something else."

Others in the *Mixed* groups went as far as to say that it was 'uncool' to be "*stigmatised*" and put in the '*green' box*, and that they avoided talking about climate change in most situations. However, this did not seem to be borne out of a fear of encountering sceptical views among peers, but rather a wish to avoid sounding 'preachy' or judgmental:

"It's very difficult, very tricky to find a balance between telling somebody something so the person won't feel that you're trying to re-educate them. So you try to say it in a very normal way or a very funny way because you don't want them to feel pressure."

As a way of circumventing the awkwardness of climate change as a topic, one participant in the *Mixed* groups suggested using humour and a more light-hearted approach to break the ice, while another agreed that dramatic framing of the issue should be avoided:

"I think we should use more humour or more light opinion and not make it such a drama but something that could be cool."

"I think the dramatisation of it turns a lot of people off. If it's dramatic, there's an undertone of 'oh you're a bit stupid if you disagree with us'. I think that can polemicise things."

However, some participants in the *Mixed* group suggested that slowly but surely the climate conversation is becoming easier:

"I think it's something that's getting progressively easier to do. It was definitely associated in the past with a niche, nerdy thing and it's partially an age thing where

it's not really cool to care about things. It's almost more embarrassing now not to understand climate change when people are talking about it and that definitely wasn't the case 5 or so years ago. So I think in terms of actually broaching the discussion, it's slightly easier."

"I'm actually happy to be put in the green box. I'm proud to be the one using organic cosmetics and being the one who knows and the one people ask questions of. People can feel guilty around me sometimes. I'm not the model but I am putting forward the issue."

Typically participants seemed uninterested in engaging with debates around whether climate change is happening but rather what to do about it. Arguing with organised scepticism was seen as a waste of energy by the few participants who were aware of it. One participant in the *Pioneer* groups put it succinctly:

"Having a head to head battle with climate sceptics, I think, is a waste of energy."

Several participants talked of being disenfranchised and feeling resentment towards the 'baby boomer' generation, who they saw as responsible for many of the problems now being faced by their generation (including climate change, the economic crisis, youth unemployment, growing economic inequality, costly higher education). Some in the *Pioneer* groups felt that young people were unfairly portrayed as apathetic:

"I think young people are talking about it [climate change] a lot more than is made out [by the media]."

In fact, across the focus groups, but particularly in the *Pioneer* groups, there was a sense of optimism that younger generations want to change things for the better or will have to (by being pushed to their limit) and that this will breed innovation and the development of an alternative paradigm. As a selection of *Pioneers* put it:

"I definitely feel a sense of responsibility and I feel there's pockets of our generation that feel that, about wanting to change the way things are."

"It's a year until the elections. There's still time to put important things at the top of the agenda for the General Election, so there's no point being disillusioned with it all."

"We've got nothing to lose."

Phase 2: Key findings

Views on UK government climate policies

Most participants were not familiar with specific government policies, although when asked to suggest some, participants in one *Pioneer* group identified support for 'fracking' as a government policy that was incompatible with sustainability. The minority of participants with more specialist backgrounds in climate change were able to point to specific policies such as a target for reducing UK carbon emissions by 80% by 2050. However, the scale and pace of government action on climate change was a source of frustration and disappointment, particularly within the *Pioneer* groups, with some even suggesting that current policies were confusing and contradictory – for the public as well as investors:

> *"All this policy is really kind of confusing not only on a personal level but in the whole sphere of things. For people and investors and business, it's quite confusing as it's changing all the time."*

> *"The most frustrating thing for me is there's no leadership…at the end of the day when you have George Osborne in the budget saying 'we're going to drill every last drop of oil out of the ground'…there's very little that our small acts can do. They're fairly meaningless if there's not that systematic change."*

> *"There's no real serious intent, it's not reaching the urgency it needs to be."*

> *"I'm tired of waiting for these powers that be to change themselves"*

With little faith in government solutions, several participants from the *Pioneer* groups said the step-change needed would have to start from the community level, where grass-roots projects are already driving and demanding change.

Participants from the *Mixed* groups were concerned that UK action in isolation from other countries would be futile and that international collaboration was needed:

> *"Our tiny little nation, what are we really going to do? What are we really going to be able to do for the environment compared to everyone else?"*

> *"It's a bit of a collaboration effort between nations... in general there needs to be a focus by governments to invest more money into renewable resources and if that's not possible then nuclear power is a better option than maintaining coal powered plants."*

When questioned about specific policies, the majority of participants (with the exception of

those who had a 'specialist' background in climate change) had not heard of (or found it very difficult to define) key UK government policies such as the Climate Change Act (2008). These are a selection of comments from the *Pioneer* groups:

> *"I'm not too aware really of the government's policies in sort of sustainability, energy."*

> *"I know they're trying to do stuff on carbon emissions, but I couldn't tell you what."*

> *"I might have* [heard of it] *but I couldn't tell you what it is."*

Participants were slightly more comfortable discussing information they had picked up from the news about government policy on specific energy sources such as 'fracked' natural gas, onshore wind power, coal and nuclear but were not always able to connect the dots to broader climate policy. When asked for their view on whether 'fracking' was good or bad, one pioneer commented, "*I'm not well informed enough to take a position on that.*"

With the exception of those who had worked, studied or volunteered specifically in the climate change field, concepts such as a 'carbon budget' were unfamiliar to most. Similarly, relatively few participants were aware of the reason why '2 degrees' was an important number in climate change debates (the amount of global warming deemed 'dangerous', measured against pre-industrial averages). This is striking given the fact that both sets of groups contained people with an above-average level of interest in climate and that terms such as '2 degrees' are in widespread use among campaigns aimed at the general public on climate change. However, across all the groups there was a discernible appetite for learning more about the specific measures needed to cut emissions (beyond the individual level). In other words, what is already being done by the government and what needs to be done, with an emphasis on solutions and raised ambition.

Evaluating the narratives

The four narratives were presented sequentially. Participants were asked to think about the language used in each narrative, which words they liked and disliked, what it made them *think,* how it made them *feel,* and whether it made them want to *act* in response.

Narrative 1: 'The things we love'

'Managing the risks of climate change can help to protect the things we love: whether that's the local football team who've had their match cancelled again because of a flooded pitch, or keeping cities healthy and free from pollution. Climate change is happening here and now, but effective climate policy to cut emissions can do something about it'.

This narrative was strongly influenced by previous COIN work for the Climate Coalition group of charities. Participants in the current project broadly liked the idea of using local, personal impacts of climate change. One participant in the *Mixed* groups said:

> "*It makes the good point of trying to make the issue relevant to young people rather than just saying this is a global issue.*"

While a *Pioneer* participant suggested that:

> "*If people know it's about protecting your things, protecting your future, your children, your home, your health, then it becomes personal as opposed to 'oh there's flooding in some other country, oh that's a shame but what can I do?' When it becomes about me then I switch on*."

Across both sets of groups, there was recognition of what this narrative was aiming to do: make climate change relevant for disengaged audiences and describing the problem in a way that might appeal beyond the 'usual suspects'. However, some just couldn't see the direct, causal link between climate change, flooded pitches and healthier cities and felt this should have been explained. One *Pioneer* said, "*I don't see the link between a flooded pitch and climate change*". The majority viewed the specific example of a flooded football pitch as too trivial, personally irrelevant and disconnected from the global character of climate change, or – in the case of 'healthier cities' – too vague to identify as a climate change issue. A *Pioneer* participant commented that:

> "*Neither sound like much to worry about. It doesn't sound like we need to act or do anything. It's bringing it a lot closer to home but it's trivializing it.*"

This response was widespread across the groups, suggesting that while the notion of bringing climate change 'closer to home' is important and potentially powerful, there is a subtle balance to be struck between making climate change personally relevant and avoiding trivialising what is well-understood to be a complex global issue with no easy fixes among this audience.

The language around 'managing climate risks' was disliked by most. Some felt it conveyed a sense of powerlessness, in that "*the risks are going to be there whatever you do and the best you can do is manage them*". Another participant commented that managing risks did not suggest urgency:

> "*Using the language of risk makes it sound like we're just juggling a few small-scale things around to see if we can work it out, rather than, wait, we need to do something quite dramatic.*"

While there is some evidence that the language of risk is a good way to communicate

about climate change with policy makers, combining it with the word 'management' turned it into a phrase that was seen as bland, weak and un-motivating. Using an alternative phrase such as 'preventing the dangerous risks of climate change' might have produced a different reaction from the groups.

Similarly, 'effective climate policy' was seen as vague, 'empty' political jargon (although it was preferred, as more concrete and suggesting policy might work, compared to the use of 'ambitious policy' in the second narrative). Participants across the groups reported that they would have preferred more specific, detailed actions to aim for with timelines and a link to what they – personally – could do:

> *"The first thing that jumped out at me was 'effective climate policy'. What is that? What should be effective climate policy that can help us with cutting emission. It needs to be more specific."*

Overall, the narrative was viewed as lacking in a sense of urgency, and not suggestive of any particular actions.

Narrative 2: 'Consensus and misinformation'

'97% of scientists agree that humans are causing climate change and that countries like the UK will be affected. And surveys show time and time again that the majority of Britons are concerned about climate change and expect decision-makers to take strong action. It's time to cut through all the misinformation in the media and see this consensus reflected in more ambitious climate policy.'

There was broad acknowledgement across participants in both sets of groups that communicating such a strong level of consensus among scientists was – in principle – a persuasive approach. Being in possession of these kinds of arguments was seen as motivating on a personal level for many people, with one participant from the *Mixed* groups claiming:

> *"It gives you the scientific backing, the fact that everyone's concerned about it and how we could start to make a change. I like the use of the statistic as you can use that for personal use as well just chatting about it."*

Several participants felt that such strong factual arguments would shock and surprise people currently disengaged by the issue and even compel them to action. However, critical to its persuasiveness was some sense of who the source providing the information was, and whether they were trusted and unbiased (as discussions in Phase 1 showed, this is not a straightforward issue). There was also a recognition that people don't generally respond well to facts and figures. One *Pioneer* commented that:

> "*I think the whole tone of it is quite aggressive and preachy...People might turn away from it. It might have that kind of effect.*"

Some people suggested that the specific '97%' figure somewhat begged the question of what the 'other 3%' thought, and why, and such statistical wrangling was in danger of distracting from the bigger picture that should concentrate on solutions. A few people in the *Mixed* groups felt it sounded exaggerated. The more generic term 'a majority of scientists' was suggested as more suitable by several *Pioneers.*

As expected from the discussions in Phase 1, there was significant empathy with the idea that there is widespread misinformation in the media, with participants who had a background in climate change particularly highlighting the tendency towards 'false balance' (whereby the media present an equal 'debate' between scientists and sceptical voices, which fails to faithfully reflect the minority status of sceptics). However, overall interest in the sceptic debate was very low.

The notion of a 'concerned majority' was dismissed by around half of the participants as not reflecting reality. One *Pioneer* commented:

> "*I don't think that people care as much as this would like to suggest. I think the disconnect between reality and the statement would make people trust it less. It will strengthen the idea that environmentalists are exaggerating.*"

The narrative was viewed as more solution-oriented than Narrative 1, with the notion of 'taking on' the misinformation in the media identified as a motivational aspect of the narrative. However, similarly to Narrative 1, it was felt to be lacking in tangible suggestions for action, with the phrase 'ambitious climate policy' described again as vague, generic and unachievable. Comments across both sets of groups included:

> "*It doesn't mean anything to me. I just want specifics. I want to know what needs changing. What about our current situation? What would climate policy involve? Are we talking about concrete measures for less emissions? My personal preference is for quite strong language and this isn't satisfactory. This isn't something that's really been on the radar sufficiently before and I don't know what we're comparing it to. I just want something that is a little more go, go, go.*"

> "*Ambitious means it's not possible. But let's try a little harder.*"

Overall, this narrative highlighted a strong appetite among the audience for a specific 'ask' in a message and clear direction on what people can practically do, whether it's calling on politicians to make climate mitigation an election issue or supporting a particular mitigation policy.

Narrative 3: 'Climate change is here and now'

'It's not fair that the people who face the worst effects of climate change will be poor people in vulnerable areas of the world. But the UK will be affected too – whether that's extreme rainfall or changes to the foods available in our shops. It's our moral duty to support our decision-makers in reducing the risks of climate change through effective climate policy.'

The third Narrative was the most popular across the two sets of groups, although more so among the *Mixed* groups, where it was viewed as the most motivating. One participant in a *Mixed* group characterized it as clearly stating "*the problem, then solution or action. I think that works well in people's heads*". The idea that climate change was a problem for 'now' resonated well across all groups. In comparison to the other three narratives, it was seen as inclusive, specific in terms of the actions that people could take, addressed the problem at scale and communicated a strong sense of urgency. One *Pioneer* commented

> "*You're saying decarbonise the economy but you're going even further than that and saying start with the power sector. To me that's much more tangible. OK, this is what we need to do. It doesn't tell me how I can do it but there's a trajectory there rather than just climate policy.*"

However, the majority of participants were unfamiliar with the concept of '2 degrees' and didn't understand exactly what 'decarbonising the economy' entailed. Both groups of *Pioneers* felt that this technical language would only appeal to a well-informed audience:

> "*This is for people who know, or are concerned about climate change already and want to know what they can do about it.*"

Alternative terms that might be better understood by a general audience than 'decarbonising the economy' were suggested, including "*cutting carbon*", "*using more alternative energy*", "*low-carbon economy*", and "*an economy less dependent on fossil fuels*".

In addition, although this narrative was viewed as offering the most tangible actions of the four, participants across the groups still felt like it could have been fleshed out further:

> "*You'd want to know how they're going to decarbonise the economy. There are some ways to do that that are better than others – for example renewables over nuclear.*"

> "*We need more concrete examples of how to get to the 2 degrees target.*"

> "*I'd be intrigued to know what they would want to do about the power sector, definitely.*"

Narrative 3 confirms the need for messaging that includes clear and tangible actions people can engage with and that conveys a sense of urgency by emphasising the immediacy and proximity of climate impacts.

Narrative 4: 'Climate change is a moral issue'

'Climate change isn't a problem for the future, it's happening now. Current generations are going to have to live with its consequences but are also the ones who can take the lead in getting to grips with it. We need to decarbonise the economy, starting with the power sector, and keep global temperatures within the '2 degrees' target to avoid the worst consequences of climate change.'

The final narrative produced a mixed response from participants. While several in the *Pioneer* groups suggested that it 'worked' for them personally, many doubted whether it would motivate people more widely across society (echoing the discussion in Phase 1 regarding the prevalence of qualities like empathy or concern for others' welfare). In common with the other narratives (except Narrative 3), it was not viewed as sufficiently hard-hitting or solution-oriented, and was perceived as lacking in concrete actions to take. No one liked the juxtaposition of climate impacts on poor people in vulnerable parts of the world with comparatively trivial UK changes to rainfall and available foods. As one *Pioneer* put it,

> "*I love the way they talk about poor people and then say let's just talk about the UK now. Oh the poor people, you know what, who gives a damn? Let's talk about the UK. Make them both important.*"

Several disliked a distinction being made between the developed and developing world and said it would be better to highlight interconnectedness and the fact that ultimately everyone will be affected by climate change:

> "*Maybe you should say climate change does not only affect poor people, it affects everyone. How does it affect you?' And then call them out.*" (*Pioneer*)

> "*I just don't like the whole us and them about it. I think there's too much of that in everyday life and it stops people from taking action.*" (*Mixed*)

In one *Pioneer* group, the following suggestion was made for achieving more interconnectedness:

> "*Maybe you should say climate change does not only affect poor people, it affects everyone. How does it affect you?' And then call them out.*"

Very few liked the appeal to moral duty, with several participants commenting that no one likes to be 'preached' at and that arguments based on guilt are unlikely to be persuasive or empowering. In particular, the 'it's not fair' phrase was felt to be whingey in tone, and hardly anyone felt a moral duty to support decision makers. Rather, the onus was on challenging them for doing nothing or acting against the interests of a low-carbon agenda. As one *Pioneer* put it:

> "*I think that collusion with the government assumes a level of trust and belief in politics that just doesn't exist. It would be better to say it's our moral duty to challenge our government because the popular perception is that they're money grabbing, self-interested, in the pockets of business. I think that antagonism would work better than support.*"

Participants' lack of trust in the wider moral compunctions of society and the ineffectiveness of preachy, guilt-laden messaging for motivating people over the long-term suggests that an appeal to moral duty should be avoided. There was a strong call for decision-makers to be challenged, solutions to be mooted and the interconnectedness of our world to be stressed over comparison and distinctions between the developed and developing world.

Writing a new narrative

The final section of Phase 2 of the narrative workshops offered a chance for participants to write their own narrative – either something entirely new, or by combining sections or phrases from the previous narratives they liked best. The results were illuminating, providing a clear indication of the common features in the narratives that were popular and those that were less supported.

The concept that received the most support was that climate change was happening 'here and now' and that it affected 'everyone'. This formed a part of many individuals' narratives, with participants emphasizing that this was a problem for the current generation, not for the future. The immediacy of this framing, coupled with the relevance for a young audience in particular, attracted widespread support across both sets of groups. Many participants also focused on ways of making climate change relevant to people's everyday lives – either through the mention of impacts such as flooding, or by invoking the principles of protecting the 'things people love'.

About a third of participants used the '97% consensus' statistic, although predominantly in the *Mixed* groups. Interestingly, it was often combined with the idea that 'everyone will be affected', suggesting that the important aspect of the scientific consensus is not that it is *happening*, but that it has consequences.

Another common theme was a desire for clear instructions about what to do next. Some

participants drew on the most specific instructions in the four narratives they evaluated (to decarbonize the power sector) but most did not actually propose concrete, tangible actions themselves. This suggests it is hard for people to intuitively grasp what sort of actions someone should take (beyond behavioural changes), and that messages that seek to compel action in an audience should be specific in what they 'ask' for. In other words, people need to know what policy change is needed, how to support its progress and how to challenge policy inimical to a sustainable, pro-climate agenda.

Below is a selection of narratives that participants from across the groups proposed:

Climate change is REAL. It affects you! What are you going to do about it? (Pioneer group)

Climate change is relevant and happening now. We need to stand up and make change. The more you do, the quicker this will no longer be a problem but a solution. This affects your jobs, homes, power, lifestyle. (Pioneer group)

Climate change is everyone's problem. It demands immediate transformation of the way we live, from the bottom up. And responsible, effective policies from our representative governments on clean energy, independence, smart technology and innovation in the sustainability agenda, by people like you. (Pioneer group)

97% of scientists agree that climate change isn't just a problem for the future – it's happening here and now. Our current generation needs to support effective climate policy to lower our carbon footprint and protect those we love from the risks of climate change. (Mixed group)

The effects of climate change on your daily life are more significant than you think. The flooding in your back yard, the changing food prices in the local market and so on. And it will become more extreme with the temperature increase. Take action now to reduce the global emissions. Talk to your local authority to see what you can do for a more sustainable future. (Mixed group)

Conclusions and recommendations for public engagement

The key findings from this project confirm many of the trends suggested in the existing literature. Young people are highly cynical about mainstream politics, do not feel well-represented by political parties, with a significant number feeling that voting is futile. However, young people are motivated by political issues that affect them. Even among a sample with above-average interest in environmental issues, climate change is viewed as a frustratingly abstract and distant concern, and one that must compete with other more pressing issues like fighting for jobs and the cost of education. Few expressed trust in either politicians or the media to provide accurate (or inspiring) information about climate change: friends and family (and to a lesser extent not-for-profit organisations) were seen as more trustworthy voices. In line with much previous work, participants in this project expressed a strong dislike and desire to disassociate themselves from the 'preachyness' of much environmental communication.

There was a clear preference for the immediacy and relevance of a narrative that frames climate change as an issue for the 'here and now' (e.g., Narrative 3). For a generation who will likely face the most significant impacts of climate change if urgent action is not taken, the idea of moving climate change from a future to a present day concern was appealing. Including clear actions, such as decarbonising the power sector as an important first step, were also welcomed by participants, who preferred direction and a focus on solutions. In particular, phases like 'ambitious climate policy' and 'managing the risks of climate change' were universally disliked, and were not considered to be empowering or motivating.

The concept of linking climate change to people's everyday personal lives through talking about the 'things we love' was strongly supported, but Narrative 1 which employed this received a mixed reception. Many did not like the specific examples chosen, suggesting that the 'devil is in the detail' with this kind of approach, and that any specific examples should be drawn from the audience itself (i.e., 'what do you love?'), or carefully tested with the intended audience first. There is a subtle balance to strike between making climate change personally relevant and rendering it trivial through examples that do not reflect the global character of the issue.

The majority found consensus messages (as adopted in Narrative 2) to be powerful and hard-hitting. These featured strongly in participants' own narratives, but were typically combined with an additional clause: that scientists agreed everyone would be affected, or that scientists agreed the impacts would be serious and that action was required. This distinction seems important as typically the '97%' statistic is used to illustrate the consensus that humans are causing climate change (and used to combat sceptics' arguments to the contrary) but in their own narratives participants used it as a rallying call to present a case for action. To the extent that sceptical discourse does not seem to feature heavily in young people's views about climate change, this suggests that fighting a

battle against misinformation may only have limited appeal.

At the same time, although sceptical arguments were not often referred to, there was doubt that a 'concerned majority' of the public really existed on climate change (despite the fact that opinion polls show that there really is one). Perhaps reflecting a distaste for 'preachy' language and messages, framings identifying a moral duty to tackle climate change (e.g. Narrative 4) were widely disliked. Based on these key findings, our recommendations for engaging with young people more effectively on climate change are:

THE DONT'S

- **Don't talk about how climate change will impact future generations**: young people see this as a problem for the *here and now* and will respond positively to messages that frame climate change as a contemporary concern that requires an urgent response. They are receptive to learning more about the consequences the UK faces and connecting this to the global picture, although this needs to handled sensitively so as to avoid trivialising the more extreme impacts in parts of the world with less capacity to adapt.

  Recommendations useful for: everyone.

- **Don't focus on 'fighting the sceptics'**. Most participants were either unaware or uninterested in the idea of organised climate change scepticism, suggesting that campaigns to counteract science-based scepticism will not be particularly useful for this audience. Debating solutions – rather than the science – is a much higher priority.

  Recommendations useful for: campaign groups, think tanks, research institutes.

- **Don't assume that climate terminology is widely understood**. Some commonly used climate advocacy phrases are either unfamiliar or unpopular with young people. Phrases such as 'more ambitious climate policy' and 'managing climate risks' are considered hollow, technocratic and vague, while terminology such as '2 degrees' and even 'decarbonisation' may be unfamiliar or disengaging. Climate jargon needs to be explained in plain language – and language about managing risks is not in itself intuitively appealing for young people.

  Recommendations useful for: campaign organisations, think tanks, research institutes and the education sector.

- **Avoid language that might be perceived as 'preachy' or guilt-inducing**. While concrete, tangible 'actions' people could take were popular, it is important to present these as things people *can* rather than *should* do. Appeals to moral duty were seen as unlikely to be motivating for the majority of the population.

  Recommendations useful for: campaign organisations and political parties.

THE DO'S

- **The notion that there is a '97% consensus' among scientists on climate change was widely viewed as a compelling and persuasive statistic** if provided by a *trusted messenger* (not a corporate voice or a politician's) and combined with a call to action. On its own it was not necessarily enough to inspire an action-oriented response among young people. It should not be treated as an argument against sceptic claims, which are not a dominant part of the climate change discourse for young people.

  Recommendation would be most useful for: campaign organisations, and the education sector.

- **Communicate the social consensus on climate action**. There is widespread doubt that there is a 'concerned majority' among the general public who support action on climate change. Communicating that there is a 'social consensus' on climate action may therefor be just as important as communicating the scientific consensus.

  Recommendation would be most useful for: everyone.

- **Show how climate change relates to (and will affect) the aspects of young people's everyday lives that they care about**. Young people – like the population in general – are receptive to the idea of protecting the 'things they love' from climate change. However, the devil is in the detail – the things people love and want to protect should not be *assumed* but instead identified through audience research. To avoid trivialising the issue, it is important to always make the link between the 'everyday' and the 'bigger picture', joining the dots between the personal and the political.

  Recommendation would be most useful for: campaign groups, education sector and youth clubs.

- **Ask young people to challenge policy makers**. Young people are willing to pressure political leaders for more progressive climate change decisions but do not, as a general rule, have much faith in politicians and other elite decision makers. Asking this audience to 'challenge' policy makers may therefore be more effective than asking them to 'support' them.

  Recommendation would be most useful for: campaign groups and the education sector.

- **Messages about climate change should be as specific as possible in the actions they recommend** using accessible language, for example 'reducing the use of fossil fuels' as opposed to 'decarbonising the economy'. Clearly set out what needs to be done – who, when, where and what young people can do to make a

difference – and which policy prescriptions support this. Young people are frustrated by the emphasis on small-scale behaviour change, such as recycling. They are open to and interested in 'bigger picture' solutions.

Recommendation would be most useful for: political parties, campaign groups, think tanks and research institutes.

- **Climate change messages must be communicated by a trustworthy messenger** (not a corporation or politician) and combined with a specific call to action. Peer networks and social media are important sources of information on climate change for young people. Generally speaking, young people are suspicious of the mainstream media, with the exception of the BBC, which is widely trusted as a provider of reliable information.

  Recommendation would be most useful for: campaign groups, think tanks, research institutes and education sector.

- **While the response to voting among participants was very mixed, there was widespread agreement that climate change is a key issue for young people**, with a minority arguing there is still time to push it up the agenda in the run-up to the General Election in 2015. This would imply that there is some political traction to be gained by political parties targeting this demographic by including pro-mitigation policies in their manifestos and campaigns.

  Recommendation would be most useful for: political parties, campaign groups, think tanks and research institutes.

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APPENDIX

Methodology for categorising participants' value-orientation

Participants were specifically recruited to reflect different underlying values-based orientations, using both Schwartz's (1992) 'circumplex' model of universal human values, and the 'values modes' method for segmenting audiences (Rose, 2011). This resulted in a recruitment questionnaire designed to capture the significant overlap between both Schwartz's (1992) categorisation of values into 'self-transcending' (universalism, benevolence, self-direction), 'self-enhancing' (achievement, power), 'open to experience' (stimulation, hedonism) and 'conservation' (conformity, tradition and security) was overlaid with the three 'values modes' profiles – *Pioneer, Prospector and Settler* (Rose, 2011). *Pioneers*' are people who strongly support principles such as creativity, self-direction, protecting the environment and living ethically. *Prospectors* are characterised as favourable towards ambition, hedonism and personal achievement, while *Settlers* are characterised as favourable towards loyalty, taking control, doing one's duty and standing up for friends and family.

COIN developed a questionnaire comprised of 12 items to capture both the values modes segmentation and underlying Schwartz circumplex model on which it is based. For each item, participants were asked to indicate the extent to which each of the 12 values was an important guiding principle in their lives, on a 5 point scale from 'very unimportant to 'very important' and then rank their top and bottom three values. The 12 items were:

- Protecting the Environment (self-transcendent/**pioneer**)
- Social Justice (self-transcendent/**pioneer**)
- Choosing Own Goals (open to experience/**pioneer**)
- Creativity (open to experience/**pioneer**)

- Enjoying Life (open to experience/**prospector**)
- Wealth (self-enhancing/**prospector**)
- Authority (self-enhancing/**prospector**)
- Ambitious (self-enhancing/**prospector**)

- Respect for tradition (conservation/**settler**)
- Social order (conservation/**settler**)
- Sense of belonging (conservation/**settler**)
- Responsible (self-transcendent/**settler**)

Based on which value category scored highest for each individual in the 5-point scale, checked against the top and bottom ranked values, participants were classified as a *Pioneer, Prospector or Settler*.

Full breakdown of participant values:

	Category	Pioneer score	Prospector score	settler score	Most important values	Least important values
1	Pioneer	19	15	12	2 Pioneer	2 Settler
2	Pioneer	16	17	15	2 Pioneer	1 each
3	Pioneer	17	13	11	2 Prospector	2 Settler
4	Pioneer	19	16	15	1 each	2 settler 1 Prospector
5	Pioneer	18	14	9	2 Pioneer 1 Prospector	3 Settler
6	Pioneer	18	14	12	2 Pioneer 1 Settler	2 Prospector 1 Settler
7	Pioneer	20	19	18	3 Pioneer	2 Prospector 1 Settler
8	Pioneer	16	12	10	1 each	1 Prospector 2 Settler
9	Pioneer	16	16	12	2 Pioneer 1 Prospector	2 Pioneer 1 Settler
10	Pioneer	19	13	16	2 Pioneer 1 Settler	2 Prospector 1 Settler
11	Pioneer	20	14	19	2 Pioneer 1 Settler	1 Pioneer 2 Prospector
12	Pioneer	16	15	9	1 each	1 Prospector 2 Settler
13	Pioneer	18	16	13	2 Pioneer 1 Prospector	1 Prospector 2 Settler

14	Pioneer	18	15	18	1 Pioneer 2 Prospector	2 Prospector 1 Settler
15	Pioneer	16	11	15	1 each	2 Prospector 1 Settler
16	Pioneer	18	16	17	1 each	1each
17	Pioneer	20	15	11	2 Pioneer 1 Prospector	1 Prospector 2 Settler
18	Pioneer	17	15	18	1 Pioneer 2 Prospector	2 Prospector 1 Settler
19	Pioneer	17	16	13	3 Pioneer	2 Prospector 1 Settler
20	Pioneer	18	10	10	2 Pioneer 1 Prospector	1 Prospector 1 Settler
21	Pioneer	18	13	14	2 Pioneer 1 Settler	2 Prospector 1 Settler
22	Pioneer	18	17	17	1 each	1 each
23	Pioneer		13		2 Pioneer 1 Settler	3 Prospector
24	Pioneer	19	14	15	2 Pioneer 1 Prospector	2 Prospector 1 Settler
25	Pioneer	18	14	12	2 Pioneer 1 Settler	2 Prospector 1 Settler
26	Pioneer/Prospector	18	17	17	1 Pioneer 2 Prospector	1 Pioneer 2 Prospector
27	Pioneer/Settler	19	18	19	1 each	1 each
28	Prospector	16	19	17	1 each	2 Pioneer 1 Settler

29	Rebel	12	12	12	Skipped	Skipped
30	Settler	18	18	17	2 Settler 1 Prospector	2 Settler 1 Prospector
31	Settler	13	13	14	1 Pioneer 2 Settler	1 Pioneer 2 Prospector
32	Settler	16	16	19	1 each	1 each
33	Settler	17	16	20	1 Prospector 2 Settler	1 each
34	Settler	14	20	20	1 each	3 Prospector
35	Settler	15	16	17	1 Prospector 2 Settler	1 each
36	Settler	14	15	15	1 Prospector 2 Settler	1 each