

Reviewer 1

Overall, this was a very innovative and interesting paper. I really enjoyed the method and analysis, and what we can learn from this type of research / community engagement approach. That said, a paragraph explaining the value, impact and process of research poetry as a both a tool of engagement, advocacy and communication would strengthen the paper, as would some reflections on why poetry.

Thank you for your kind comments. We agree that a paragraph on the potential value and impact of research poetry would be of great benefit to the reader and would also strengthen the paper. We have constructed the following paragraph to address this issue, which also reflects on why poetry (rather than another artistic medium) was used in this approach; this paragraph will be inserted in Section 2 (Materials and Methods), where the poetry-writing exercises are first introduced:

Poetry can used to help reframe and develop dialogue amongst participants and has an established history as a tool that can be used by researchers to both communicate with and elicit engagement amongst different audiences. For example, by turning participant recordings and transcripts into poetic performances, Finley (2003) demonstrated how poetic responses might be used to open up new dialogues with communities, using their own words but presented in an alternative format. Similarly, poetry that is written by participants can be used as data by researchers to better understand the lifeworlds of the authors, serving as powerful narrative examples in the development of education and advocacy goals (Poindexter, 2002). By asking the participants to write their own poetry, we hoped to enable them to consider their thoughts and opinions in a creative space, which could then be analysed alongside their non-poetic responses. The reasons that poetry was used rather than another artistic medium (e.g. sculpture or drawing) were two-fold. Firstly, the workshop facilitator (SI) has experience in both creating poetry and running poetry-writing workshops, as such he was able to play the role of what Vygotsky (1980) termed the 'More Knowledgeable Other', and in doing so could help to extend the social learning of the participants. Secondly, poetry writing is a very accessible activity that only requires paper and pens / pencils, and which can be both easily transported and also supported; for example, with regards to participants who are themselves unable to write.

Reviewer 2

This paper will be of interest to researchers across different disciplines, particularly those who are considering doing outreach or public engagement of their own. I found its justifications, methods and materials to be clear and coherent and it raises some important points about the use of qualitative research embedded in communities.

Thank you for your kind words, and for your useful critique of this research. We will now respond to the two specific points that you have mentioned in turn.

Poetry: I agree with the first reviewer's comments that the reasons for selecting poetry needed to be given slightly more space. The authors' proposed additional paragraph goes much of the way towards rectifying this. It strikes me that many of the positive points here could be applied to other types of creative-writing exercise, and it seems that one of the reasons was the expertise of the workshop co-ordinator as playing the role of 'more knowledgeable other'. (No Problem with that.) However, at certain points the article touches on some poetry-specific features e.g. the way participants really engaged with poetry despite it being seen as elitist/difficult'. There are also some considerations of the way these workshops could be re-vised/repeated elsewhere. I think it is worth having a couple of sentences at least considering, during future/followup workshops, poetry could be more than, as the authors call it, a 'tool'. After all poetry has a highly developed (and comparatively accessible) tradition of thinking about and engaging with both place/community and 'nature'. In sum: Is it worth saying something about whether such community workshops could incorporate the reading as well as the writing of poetry, even if only to rule it out?

This is an excellent point, and we agree that poetry can (and should) definitely be used in this manner. When we spoke about poetry being used as a 'tool', we wanted to make the distinction between it being used as a 'tool' and being used as 'data' to be analysed and considered. However, it is absolutely necessary that we highlight how reading (and even analysing) poetry might be used in such community workshops to great effect. As such, the paragraph that was added in response to Reviewer 1 was added with the following:

It should also be noted that reading and analysing (as well as writing) poetry can also be used to engage different audiences with specific topics, and that there is a history of such initiatives being used to successfully explore different relationships and opinions across and between communities (see e.g. Furman et al., 2004). However, for the purposes of this research, we chose to focus on writing poetry as it allowed for the most collaborative experience within the framework of the workshops.

Furthermore, the Final paragraph of Section 4 ('Discussion') was also amended to reflect how reading poetry might be used in future workshops (the new text is in bold):

This study is limited in its findings, in that we only report on the outcomes of three workshops run in three different community groups. The findings would likely be very different were these workshops to be run again but with different communities. However, this further serves to underline the thesis of this study, i.e. that qualitative research at the community level is an essential accompaniment to larger scale research projects that look at the way in which climate change is communicated. One-off workshops were used in this study, as we believe that it represents a model that could be most easily adopted by other researchers and for other communities. Additionally, this study was not designed to monitor the long-term impacts of these workshops; however, given the responses of the participants (and in particular the comments made by the Avonmouth group – see Section 3.1), such a study would likely yield interesting results. In addition to working with different communities and monitoring any long-term impacts, future studies could also adopt a similar approach

to running workshops with several communities at a time. **Furthermore, future workshops could also involve an element of reading and discussing poetry that had already been written (either by well-known poets, or by other communities in similar workshops) about issues that the community identified as being important, as doing so would allow participants to explore and discuss different perspectives and lifeworlds.** As demonstrated in this study, the collaborative poetry writing worked well in allowing participants to explore each other's lived experiences in a creative and non-confrontational manner. Such an approach would also likely be successful in helping to bring together different (and perhaps opposed) communities by enabling them to discuss their lifeworlds in this way, as was exemplified by workshop involving the Manchester faith leaders (see Section 3.3).

Religion: Hearing how the participants from different faith communities engaged with the workshop was one of the most interesting parts of this article. I agree with the conclusion that working with faith leaders to develop dialogue across the diverse communities is a worthwhile initiative, and that awareness of different publics' perspectives, needs and worldviews is part of climate change communication. Therefore it strikes me that the article could do slightly more to engage with the relationship between religious discourses and ecological awareness in their own terms rather than too quickly putting them into an already familiar language of sustainability. The things in the discussion about neighbourly responsibility, or living in the moment with less focus on consumption, are not just connected to community experience but in part emerge from a religious world view that might complement but also find itself in tension with aspects of ecological communication. And while the implications need not be discussed in detail here they could perhaps be better acknowledged/signposted in a few sentences (e.g. in regard to Laudato Si, or even a Quaker sense of stewardship etc etc.).

We agree that the interactions between the different faith communities and their responses was very enlightening. We also agree that in presenting this discussion we should have at least acknowledged the potential of tensions between religious discourse and climate change communications, especially given the discussion that took place in terms of which communities the faith leaders felt they did and did not belong to. As such, the following text has been added to Section 4 ('Discussion'; new text in bold):

The community of faith leaders had a similar outlook to the Stockport group, recognising that: "We must reduce the harm we cause / Both personal and corporate ware / A better carbon footprint / Before our world we tear." And that "To make the world more fair. / We need to change behaviour". As with the Avonmouth group, they also realised the need for education, and given their own positions within their communities they recognised that any initial activity likely needed to be driven by them. This was arguably a different type of individual responsibility than was evidenced in the other two workshops, as the faith leaders recognised that in some instances without their guidance and support for a particular topic action might not be instigated or even possible. In working with this community, it could be argued that effective climate change communications would provide reliable resources and frameworks for engagement that could then be shared by the individuals amongst their own communities and organisations. **As was indicated by the participants**

themselves during this discussion, their sense of community is intertwined with their own religious worldviews, and as such several of these attitudes (e.g. 'overcoming prejudices' and 'addressing consumption') might be driven by religious practices rather than environmental concerns. It would also be interesting to further investigate what would happen if recommendations for successful climate change mitigation strategies at the local community level clashed with the religious ideologies or discourses of a particular group. As Maxwell (2003, pp. 257) observed: "reductionist perceptions of reality are proving inadequate for addressing the complex, interconnected problems of the current age", and in addition to the benefits of working with such groups in tackling climate change, it would be worthwhile for future workshops to investigate the extent to which religious world views potentially clashed with climate change communications, and how different faith leaders reacted as a result.

References

- FINLEY, M. 2003. Fugue of the street rat: Writing research poetry. *International Journal of Qualitative Studies in Education*, 16, 603-604.
- FURMAN, R., RIDDOCH, R. & COLLINS, K. 2004. Poetry, Writing, and Community Practice. *Human Service Education*, 24.
- MAXWELL, T. P. 2003. Integral spirituality, deep science, and ecological awareness. *Zygon*[®], 38, 257-276.
- POINDEXTER, C. C. 2002. Research as poetry: A couple experiences HIV. *Qualitative Inquiry*, 8, 707-714.
- VYGOTSKY, L. S. 1980. *Mind in society: The development of higher psychological processes*, Harvard university press.

1 Representing the majority and not the minority: the
2 importance of the individual in communicating climate
3 change

4
5 Sam Illingworth¹, Alice Bell², Stuart Capstick³, Adam Corner⁴, Piers Forster⁵, Rosie Leigh⁶,
6 Maria Loroño Leturiondo¹, Catherine Muller⁷, Harriett Richardson⁸, Emily Shuckburgh⁹

7
8 ¹School of Science and the Environment, Manchester Metropolitan University, Manchester,
9 UK

10 ²10:10, London, UK

11 ³School of Psychology, Cardiff University, UK

12 ⁴Climate Outreach, Oxford, UK

13 ⁵Priestley International Centre for Climate, University of Leeds, Leeds, UK

14 ⁶National Centre for Earth Observation, University of Leicester, Leicester, UK

15 ⁷Royal Meteorological Society, Reading, UK

16 ⁸National Centre for Atmospheric Science, University of Leeds, Leeds, UK

17 ⁹British Antarctic Survey, Cambridge, UK

18

19 *Correspondence to:* Sam Illingworth (s.illingworth@mmu.ac.uk)

20

21

22 Abstract

23

24 This research presents three case studies, through which a creative approach to developing
25 dialogue around climate change is outlined. By working with three distinct communities and
26 encouraging them to discuss and write poetry about how climate change affects them, we
27 demonstrate how such an approach might be adopted at this level. By analysing the
28 discussions and poetry that arose out of these workshops we show how this community-
29 level approach to communicating climate change is an essential counterpart to wider-scale
30 quantitative research. The engagement of each community with climate change is
31 dependent on the lived experiences of their members; a failure to recognise this results in
32 less effective communications and can also cause communities to feel isolated and helpless.
33 By considering the individual needs and aspirations of these communities we can support
34 effective dialogue around the topic of climate change, and in doing so can better engender
35 positive action against the negative effects of anthropogenic climate change.

36

37 Keywords

38

39 Public Engagement, Climate Change, Dialogue

40

41 1. Introduction

42

43 The communication of climate change has traditionally followed a deficit model (Bickerstaff,
44 2004), in which a one-way, top-down communication process is adopted. In this approach

1 scientists have been tasked as the 'experts', whose role is to educate a 'non-expert' general
2 public, by increasing their knowledge about a particular topic that the experts deemed to be
3 the most significant (Miller, 2001). However, this one-way approach to the communication
4 of climate change is unlikely to bring about the changes that are needed for adaptation and
5 mitigation, as it fails to consider a series of factors that are key determinants of the way
6 people perceive and react to information (Swim et al., 2009). There is not a one-size-fits-all
7 approach that is able to engage society as a whole in regards to climate change. In addition
8 to the type of information individuals need, the way this information is presented will also
9 have an impact on how it is perceived and taken on board. The source of the information is
10 another factor that influences how it is perceived and assessed, and lack of trust in a source,
11 such as the government, the media, or scientists, has proven to affect responsiveness to the
12 message (Goodwin and Dahlstrom, 2014). Information provided by a source that is
13 perceived as untrustworthy and through one-way communication is unlikely to be effective.
14 For example, a lack of trust in the government can affect how people perceive policies in
15 relation to climate change (Lorenzoni et al., 2007).

16
17 In contrast to the deficit model, a dialogue model of two-way communication highlights the
18 need to explore the identities and social norms of different groups in society, as well as the
19 importance of acknowledging the existence of many publics - in contrast to what the deficit
20 model referred to as a single public (Priest, 2016). Furthermore, it also acknowledges that
21 the 'non-experts' that constitute the publics also have their own skills and expertise that
22 might also be utilised in the development of research governance (Burns and Gentry, 1998),
23 particularly in the case of these people's own lives and needs, for which they could and
24 should be considered the experts.

25
26 The Climate Communication Project aims to understand and evaluate existing expertise in
27 the UK on communicating and engaging the public with climate change. A substantial focus
28 of this project is an expert elicitation (see e.g. de Franca Doria et al., 2009) of the climate
29 communication community, to better understand how a range of specialists carry out their
30 work, to share and promote best practice in the UK, and to point to areas where more
31 investment and attention is needed. This project aims to support and enable a wider
32 structural adjustment to how climate change is discussed and communicated. However, as
33 argued by Lorenzoni et al. (2007) alongside this approach there also needs to be a targeted
34 and tailored information provision to, and communication with, individual citizens and
35 communities. Furthermore, it is essential that the voices of these communities are solicited
36 and considered in the construction of this wider structural adjustment. The work that is
37 presented here reports on a series of dialogues that were established with a small selection
38 of communities across the UK, in order to better demonstrate the importance of these
39 individual voices in developing effective climate change communication strategies.

40
41 For this study, a series of three workshops (located in Bristol, Stockport, and Manchester)
42 were coordinated with three distinct and diverse audience groups. Rather than hosting a
43 series of events and expecting members of the community to 'come to us', researchers
44 travelled to established community groups to discuss their needs and potential barriers to
45 considering scientific topics relating to climate change. Three distinct community groups
46 were chosen: the Avonmouth Community Centre in Bristol, Disability Stockport, and a
47 collection of faith groups in Manchester. It is the central thesis of this work that all

1 communities and citizens offer potentially different voices, and as such we did not aim to be
2 representative of 'every' community in the UK. Rather we decided to pick a small number of
3 communities in order to demonstrate the value of this approach, and to provide further
4 evidence for its role in developing a more effective communications strategy around climate
5 change.

6
7 These three communities were chosen because of their varied composition, and because
8 previous research has highlighted some of the challenges and opportunities of
9 communicating climate change with similar groups. The Avonmouth and Lawrence Western
10 Ward, in which the Avonmouth Community Centre is located, contains areas that are
11 considered to be amongst the most deprived 10% in England (Bristol City Council, 2015).
12 Previous research has shown environmental concerns increase with social class (see e.g.
13 Norton and Leaman, 2004), although actual environmental footprint tends to increase with
14 wealth (Büchs and Schnepf, 2013). Furthermore, since the early days of the environmental
15 movement in the 1960s, community centres have been seen as a potential focus for
16 effective communication strategies (Burgess et al., 1998). By working with the Avonmouth
17 Community Centre we hoped to better understand the role that community centres could
18 play in engaging with people from different social classes.

19
20 As noted by Heltberg et al. (2009) the impacts of climate change, even in developed
21 countries such as the UK will sometimes fall disproportionately on vulnerable individuals,
22 with the disabled forming part of the population most at risk from the effects of climate
23 change (Maibach et al., 2010). By working with Disability Stockport, we wanted to ensure
24 that we were giving a voice to the potentially vulnerable, and to better understand their
25 perceptions of how climate change would affect them both as individuals and as a
26 community.

27
28 Finally, faith communities tend to share an emphasis on long-term stewardship and can help
29 disseminate information to their publics (Frumkin et al., 2008). By bringing together a group
30 of faith leaders from across Manchester we wanted to get a range of different faith
31 perspectives in relation to climate change, and to better understand how this information
32 was communicated to their respective communities.

33
34 As well as the specific opportunities for dialogue in working with each of these
35 communities, it was the aim of this study to demonstrate that these workshops are an
36 effective way of creating a safe space for discussion around climate change. Furthermore,
37 we wanted to show how such an approach could be utilized by other researchers and how
38 this is a necessary accompaniment to any large-scale plans for communicating climate
39 change at a national level or beyond.

40 41 2. Materials and Methods

42
43 As stated in Section 1, the planned workshops were to take place in the spaces of the
44 selected communities rather than expecting participants to travel to a university or neutral
45 location. The reason for this was so that we could better create a safe space in which
46 participants felt comfortable in discussing how climate change affected their communities,
47 as well as individuals' more general concerns about climate change. In planning these

1 workshops, a two-way dialogue was established between the workshop facilitator (SI) and
2 the community leaders and gatekeepers. Through these dialogues, suitable dates and times
3 for the workshops were decided, with each scheduled to last between two and three hours,
4 and at times that were seen as compatible with the lifestyles of the community members.
5 Based on previous experiences and the nature of the activities that were planned for these
6 workshops (see below), between five and ten participants for each of the workshops was
7 seen as optimal, thereby ensuring that all opinions could be voiced and discussed in the
8 time allowed. This number of participants also helped to increase the relative homogeneity
9 within each group in order to capitalise on people's shared experiences (Kitzinger, 1995)
10 relative to the community that they were representing.

11
12 Following the work of Illingworth and Jack (2018), it was decided that as well as having a
13 facilitator (SI) and a number of community members, these workshops should also involve
14 the participation of one climate communications expert. The reasons for this were two-fold.
15 Firstly, it meant that if any technical questions relating to climate change arose then these
16 experts would be on hand to provide that information, or else recommend a suitable source
17 for further inquiry. Secondly, by involving climate ~~communications-change~~ experts in the
18 workshop, we hoped to demonstrate to them first-hand the diverse nature of the publics
19 that there were communicating with. The recruitment of the participants for these
20 workshops was done through the organisations that we were working with as part of this
21 study, i.e. the Avonmouth Community Centre, Disability Stockport, and the Manchester
22 Cathedral. Participants were recruited directly through the community groups and their
23 gatekeepers, with a very basic flyer provided to each of the organisations so that they could
24 advertise the planned date and time of the event. Prior to the workshops there were no
25 incentives, financial or otherwise, offered to the participants to encourage attendance,
26 other than some basic refreshments.

27
28 These workshops all adopted a similar format, beginning with a pre-workshop questionnaire
29 (see Appendix) to be filled out individually by the participants (It should be noted that this
30 pre-workshop questionnaire actually took place at the beginning of the workshop, prior to
31 the initial conversations, and so would probably have been better named 'pre-discussion
32 questionnaire'). This questionnaire involved asking the participants to first consider the
33 major issues that affected their community (not necessarily related to climate change), and
34 then to think about how climate change affected them at an individual and community level
35 (if it did at all) and the way(s) in which climate change was currently communicated; ~~This
36 would take it was filled in place~~ after the initial scope of the research had been explained by
37 SI and the consent forms had been signed. These responses were to form the basis of the
38 initial discussions amongst the participants, with their responses acting as an aide memoire
39 to both help direct the dialogue during the workshops, and also to serve as a record for data
40 collection. Following this discussion, the participants were guided through a series of
41 poetry-writing exercises, which involved them first working as individuals and then
42 collectively to write poetry about two different topics: their community, and climate
43 change. Poetry was used in this way as it has been shown to be an effective tool in
44 developing dialogue amongst underserved audiences (Illingworth and Jack, 2018), whilst
45 offering an alternative form of data collection to complement that recorded in the pre-
46 workshop questionnaire. These poems were then further discussed amongst the
47 participants, following which a post-workshop questionnaire was individually completed.

1 This post-workshop questionnaire was designed to assess the opinions of the participants in
2 relation to the workshop, and to determine if they had any further questions or required
3 any additional information about anything that had been discussed. Throughout the
4 workshops, SI made detailed field notes to later help in the analysis of the responses; this
5 largely took the form of recording and observing the general nature of the discussions that
6 followed the pre-workshop questionnaire and the creation of the poetry.

7
8 Poetry can used to help reframe and develop dialogue amongst participants and has an
9 established history as a tool that can be used by researchers to both communicate with and
10 elicit engagement amongst different audiences. For example, by turning participant
11 recordings and transcripts into poetic performances, Finley (2003) demonstrated how
12 poetic responses might be used to open up new dialogues with communities, using their
13 own words but presented in an alternative format. Similarly, poetry that is written by
14 participants can be used as data by researchers to better understand the lifeworlds of the
15 authors, serving as powerful narrative examples in the development of education and
16 advocacy goals (Poindexter, 2002). By asking the participants to write their own poetry, we
17 hoped to enable them to consider their thoughts and opinions in a creative space, which
18 could then be analysed alongside their non-poetic responses. The reasons that poetry was
19 used rather than another artistic medium (e.g. sculpture or drawing) were two-fold. Firstly,
20 the workshop facilitator (SI) has experience in both creating poetry and running poetry-
21 writing workshops, as such he was able to play the role of what Vygotsky (1980) termed the
22 'More Knowledgeable Other', and in doing so could help to extend the social learning of the
23 participants. Secondly, poetry writing is a very accessible activity that only requires paper
24 and pens / pencils, and which can be both easily transported and also supported; for
25 example, with regards to participants who are themselves unable to write. It should also be
26 noted that reading and analysing (as well as writing) poetry can also be used to engage
27 different audiences with specific topics, and that there is a history of such initiatives being
28 used to successfully explore different relationships and opinions across and between
29 communities (see e.g. Furman et al., 2004). However, for the purposes of this research, we
30 chose to focus on writing poetry as it allowed for the most collaborative experience within
31 the framework of the workshops.
32
33

34 The poetry-writing exercises involved four basic steps:

- 35
361. Participants were asked to write a 'list poem' about the chosen topic (either 'your
37 community' or 'climate change'). In this exercise, the participants were given 90 seconds to
38 list everything that they associated with the chosen topic and were reminded that this need
39 not only be things that they could see, but rather that the list could comprise of any
40 associated sense, emotion, or experience.
412. Participants were asked to write one sentence about the chosen topic (either 'How you feel
42 about your community' or 'How you feel about climate change', using the list poem as a
43 word bank for inspiration if required.
443. Participants were then asked to work in pairs and to combine their two sentences. The
45 collaborative effort did not have to rhyme, but it did have to reflect both individuals'
46 observations, and could either be a combination of the two sentences or else something
47 new entirely.

14. Pairs of participants were then asked to work with another pair, and to combine all thoughts and sentences into a coherent piece. Again, this did not have to rhyme, but all participants had to be happy that their thoughts and opinions were reflected in the finished piece.

The poetry writing exercises took place after the initial discussion, as it was hypothesised that this initial dialogue would help the community members to explore their opinions in relation to climate change, both as individuals and as a collective. Furthermore, it was theorised that the poetry would be congruent with these discussions, presenting them in an alternative format that could be shared and analysed alongside the responses to the pre-workshop questionnaire.

All of the questions and prompts that were used throughout the workshops can be found in the Appendix and were also sent to the gatekeepers in advance of the workshops so that their suitability for the participants could be assessed and any necessary provisions to ensure inclusivity could be made. During this study anonymity was preserved by not recording any identifiable information, and during the analysis, any specific or personal narratives that could be seen as identifiable was redacted and destroyed without recording. Furthermore, all the participants were given sufficient time to read the consent forms, so as to avoid assumed consent, and any support workers had access to the consent forms prior to the workshop, so that they could help advise and inform. A suitable line of support was also established through which any distress could be reported and suitably dealt with. By working alongside the support workers all participants knew exactly what the study was for, what it entailed, and what their involvement was. All the support workers were made fully aware of the study, and it was made clear to all participants that they could take part in the activities without having their responses recorded or subsequently analysed. This research project received full ethics approval via Manchester Metropolitan University's Academic Ethics Committee.

3. Case Studies

The findings from the three different workshops are presented as three individual case studies, followed by a discussion in Section 4 about general findings and recommendations in terms of what this approach has taught us. As noted by Moser (2010), more case-specific research is required in relation to communicating climate change, mainly because there is no 'one-size-fits-all solution', with different audiences requiring different narratives, frames, media and communicators. By presenting the findings of these workshops as case studies we hope to better address this requirement, and to also provide further evidence for the need of this type of qualitative research in order to develop effective climate change communications strategies.

Each of these case studies will begin with a general overview of the logistics of the workshop, followed by a presentation of the discussion that occurred following the pre-workshop questionnaire. The poems that were written by the community groups will then be presented and contextualized in relation to this discussion, followed by a summary of the key findings for each community group. With regards to the poems that appear throughout this study, other than correcting for spelling they are presented exactly as they were written by the participants during the workshops.

1
2 3.1 The Avonmouth Community Centre
3

4 This workshop was conducted on a Monday lunchtime, and there were five participants,
5 including the climate communications expert. The participants were made up of local
6 residents, volunteers, and people that worked in the area. We spent about 105 minutes
7 discussing the pre-workshop questions, and about 45 minutes writing poetry and discussing
8 what this meant and why it had been written.
9

10 In the initial discussions around what issues the participants considered to be most
11 pertinent to their community, better engagement all community members, health (both
12 physical and mental), and identity seemed to be the most prevalent. In discussing these
13 subjects, the participants revealed that Avonmouth often felt very geographically isolated
14 (“it doesn’t even feature in some local area maps of Bristol”), and as a result many of the
15 inhabitants found it difficult to engage with other community groups such as local industries
16 and policymakers. Furthermore, the issues that people found to be important were
17 acknowledged by them to be relatively transient, likely to change on a daily basis, and
18 dependent on a range of physical and psychological factors; for example, litter might be
19 seen as an important issue because someone threw litter outside their house the previous
20 evening. As well as reporting on being worried about geographical isolation, the participants
21 also highlighted that this was linked to their concerns regarding the mental health of their
22 community members, especially the elderly.
23

24 With regards to whether or not climate change affected themselves and their communities
25 there was initially honest ambivalence, although as one of the participants noted:
26

27 “I’m not sure people talk about ‘climate change’ - they may discuss elements such as
28 pollution, seasonal changes / temperatures, recycling, etc.”
29

30 To corroborate this point of view, when asked to expand on these changes to the climate,
31 two of the participants (who had lived in the area for the whole of their lives) spent time
32 discussing how the area was now a lot less polluted than it had been in their youth. With
33 regards to the pollution of Avonmouth, two of the participants discussed at length how
34 Avonmouth had once been known for the ‘black sheep’ caused by the pollution of the
35 docklands in the 1960s and 1970s. The Clean Air Act of 1970 and its subsequent
36 amendments (Greenstone, 2004) was likely responsible for the improvement in air quality,
37 although the participants revealed that to many people “Avonmouth smells”. This smell is
38 no longer literal (and indeed SI noticed no such odour), but this is a view and descriptor that
39 is set in the minds of many people living in neighbouring districts, thereby possibly
40 contributing to the feelings of geographical isolation. In 2014, the Environment Agency
41 installed a mobile dust monitor in the port at Avonmouth, following community concerns
42 about dust (The Environment Agency, 2015). After completing their air quality and dust
43 monitoring work the Environment Agency were able to demonstrate that air quality in
44 Avonmouth is typical of an urban setting and should not give rise to an increased risk of
45 respiratory health problems. This monitoring work was not mentioned by the participants in
46 this workshop but is stated here as further evidence that the pollution, perceived or
47 otherwise, in this area is something that the community is deeply affected by. As Bickerstaff

1 (2004) explains, places can suffer 'environmental stigma' without there being a clear
2 episode of contamination. Stigmatisation can be derived from perception, and often starts
3 with the very same people who live in that community. Stigma not only affects the place,
4 but also the people who live in it making them feel trapped, isolated and powerless. In
5 terms of climate change mitigation and adaptation, stigma is counter-productive because
6 the feeling of marginalisation and powerlessness can result in inaction or dismissal of the
7 climate change problem altogether. Therefore, including the views of communities that feel
8 stigmatised can also be a tool to break this stigma, stop the feeling of powerlessness, and
9 encourage action.

10
11 In discussing what climate change is, and how it may or may not affect the local community,
12 it quickly became apparent that a perceived conflict within the climate change community
13 puts people off addressing it, as does the language and negativity that is associated with the
14 debate centred on this topic. One of the participants stated that:

15
16 "People treat climate change deniers like holocaust deniers."

17
18 Whilst another participant stated that the way in which climate change is currently
19 communicated and discussed in the UK:

20
21 "Seems like an argument."

22
23 These opinions led to a discussion which also revealed that the community members felt
24 that the politicisation of climate change made it difficult to discuss openly, and as such that
25 it was almost impossible to "own" and/or take responsibility for. This would seem to
26 advance the work of Poortinga et al. (2011); i.e. that the acceptance of climate change is not
27 only rooted in people's core values and worldviews but also what they perceive to be the
28 core values and worldviews of others. Kahan (2012) has likewise argued that people for the
29 most part take their cues from peers and own their cultural group on climate
30 change. During the discussion with community members, it also became clear that the
31 participants were not aware of the true extent of the consensus amongst climate change
32 scientists, and the majority of them were surprised when it was revealed that this number
33 was 97-98% (Cook et al., 2016), having previously believed it to be closer to 50%. The
34 participants also revealed that they were unclear of where to go for honest and reliable
35 information. Furthermore, some of the participants considered scientists to be government
36 and industrial stooges, and therefore not necessarily to be trusted. One participant provided
37 further evidence for this opinion in the following statement:

38
39 "If nutritional scientists are always changing their mind about diet and what is
40 healthy or not, then why should people believe that climate scientists are any
41 different?"

42
43 This opinion further supports why one-way communications from such 'experts' will remain
44 unsuccessful (Lorenzoni et al., 2007). However, by the end of the discussion there was a
45 general consensus that climate change was something that affected the local area at both
46 the community and the individual level, and that in order to better relay this information
47 and discuss what could be done to mitigate its effects, there was a need to move away from

1 a 'one-way forum' and towards a 'conversation café' i.e. the creation of an environment
2 which these conversations could take place in a shared space and where no one would be
3 judged. Conversations then turned towards what difference a single individual could make,
4 and if asking this question was having a negative effect on discussing climate change and
5 whether or not people could realistically be expected to take on this personal
6 responsibility. This discussion featured input from SI and the other expert in terms of
7 answering technical questions and providing information such as the true figures for
8 consensus amongst scientists studying climate change. However, neither SI nor the expert
9 acted in any way so as to persuade or dissuade any of the participants from a particular way
10 of thinking.

11
12 Following these discussions, the following two poems were written collectively by the local
13 community participants. On the subject of 'How you feel about your local community':

14
15 Looking back through today's eye at
16 an interesting, friendly place full of history
17 appreciating what we have
18 a bit dishevelled, sometimes unloved
19 but with potential to thrive
20 feels caring, friendly, home
21 loving where we live and work.

22
23 And on the subject of 'How you feel about climate change':

24
25 Confused, conflicted, guilty, sad, helpless but I have a
26 responsibility to educate myself, live simply and do whatever
27 I can to affect positive change... we can educate people
28 to the real statistics of what is happening in our world.

29
30 In discussing these two poems, the participants made it clear that for both subjects (i.e.
31 their community and climate change) whilst work was needed to improve the current
32 situation, hope was not lost. In reading these poems, it is clear that the participants have a
33 strong sense of civic pride in their local community, and that it is a place that they are
34 genuinely proud to call home. Furthermore, they believe that they have a duty of care to
35 improve their community and the lives of those people in it, and that this extends to the
36 effects of climate change. Given the lengthy discussion on the consensus of climate change
37 scientists and the surrounding ideas of media bias, it is unsurprising that it features so
38 prominently. On reading these poems it is also evident that the participants believe they
39 have a responsibility to affect positive change and to educate people. The collective poem
40 on climate change that they wrote accurately summarised the previous discussion (even
41 though this was not explicitly or implicitly expressed to the participants prior to the
42 exercise), i.e. that there was a desire to have an open and honest conversation in a safe
43 environment, and that this approach could then be used to educate others so that they
44 could also make up their own minds. It should be noted that throughout this study, there is
45 no emphasis placed on the aesthetic quality of the poetry, and that by emphasising this to
46 the participants it was easier to create a shared space for creativity and sharing.

47

1 From the post-workshop questionnaire, the main issues that people still wanted to address
2 were what they could do to help, whether they were too late to help, and where the best
3 resources were to find out more about climate change and how to mitigate its effects.
4 Overall everyone seemed to enjoy the workshop, although they would have liked even more
5 time to work on their poems. A response of note for this section of the questionnaire was
6 that one of the participants now felt as though they would come to the workshop facilitator
7 (SI) for more information about climate change; previously this participant had been
8 sceptical of trusting scientists for the reasons outlined above. Furthermore, this participant
9 contacted SI a couple of weeks after the workshop with the following request:

10
11 "I have been thinking a lot about the workshop and I was wondering if it would be ok
12 to use the idea of it with other people. I wanted to try doing it with the Quaker
13 children meeting and our lunch group."
14

15 This request serves to underline the effectiveness of the approach that was adopted for this
16 workshop; by creating a safe space in which dialogue could be established and individual
17 voices could be heard and listened to, the perceptions of scientists changed from
18 untrustworthy to valued and reliable sources of information; in this case with the added
19 advantage that the approach was adopted and taken on in another context. This workshop
20 also highlighted the potential roles that community centres can play in providing a safe
21 space for discussions surrounding climate change in a neutral and non-politicised
22 environment. Shortly before the workshop in Avonmouth, SI also spoke to a group of
23 'Community Payback' young men who were having their lunch in the community centre. In
24 these conversations, they were respectful and honest in informing SI that they did not care
25 at all about climate change, and that there was no point as "the world was going to end
26 anyway". They were perfectly happy to talk to SI and to express these views but did not
27 want to engage further on the subject. Perhaps it is the community volunteers of
28 Avonmouth who are better served to engage this audience around the effects of climate
29 change, and to help demonstrate how despite being "a bit dishevelled, sometimes unloved"
30 they have "potential to thrive". The effectiveness of involving mediators who already have
31 access to harder-to-reach communities, who are already trusted by these communities, and
32 who understand the community's ecology is also highlighted in other studies with a similar
33 purpose (e.g. Ramirez et al., 2015).
34

35 3.2 Disability Stockport

36
37 This workshop was conducted on a Monday afternoon at Disability Stockport, with five
38 participants, including the climate communications expert. The participants were made up
39 of volunteers and patrons of Disability Stockport, including one participant with severe
40 learning difficulties who needed support throughout the workshop. This support was
41 provided by SI who worked with this participant on a one-to-one basis, and then helped to
42 feed back their input to the rest of the group during the discussions and poetry-writing
43 exercises. We spent about 80 minutes discussing the pre-workshop questions and about 40
44 minutes writing poetry and discussing what this meant and why it had been written.
45

46 In the initial discussions about what the participants found to be important in their local
47 community, social justice and equality for all were the dominant topic of conversation. The

1 participants were finely attuned to inclusivity and wanted to ensure that all of their
2 community members had a strong and discernible voice on matters that affected them,
3 even if they were not necessarily aware that this was the case. In talking to the more
4 vulnerable participants and their carers, it became apparent that they are completely reliant
5 on friends and family members for information on most topics, and so it is vital that these
6 people are equipped with the correct information and tools to help further engender this
7 communication. Any biases, perceived or otherwise, that these carers and volunteers are
8 subjected to will likewise be passed on to the vulnerable members of the community that
9 they help to support. In discussing the issues that were most important to the local
10 community, the importance of living in a healthy environment was raised repeatedly, and
11 what this meant in terms of both physical and mental wellbeing. As with the Avonmouth
12 community, the mental health of the community members, and the risk of isolation and
13 exclusion that this could bring, were also seen as very important issues.

14
15 With regards to climate change, the responses from the participants were varied. The
16 volunteers appeared to be very aware of the subject and how it affected both them
17 personally and also the people that they cared for and the wider community. This is perhaps
18 reflective of the several sustainability initiatives that Disability Stockport has led and been
19 involved with, including its use of compostable recycling and the installation of solar panels
20 on the roof of their building, which they self-funded through fundraising events (Crush and
21 Cameron, 2015). However, the more vulnerable members of the community were much less
22 aware about climate change and the effects that it would have on them. This awareness
23 ranged from a feeling that climate change was 'bad' but an inability to articulate why this
24 was the case, to having absolutely no concept of the processes or effects of climate change.
25 This lack of awareness as to the existence of climate change might in part be explained by
26 the way in which it is communicated, with one of the volunteers stating that this was done
27 by:

28
29 "the usual suspects... through interest groups like F.O.E., the UN, The Guardian, and
30 Greenpeace."

31
32 The participants felt that as well as the 'usual suspects' attempting to communicate climate
33 change, the audience that they were communicating to also consisted of the 'usual
34 suspects' and did not tend to include the members of their community, both in terms of
35 Disability Stockport and Stockport more generally. However, as one of the participants
36 pointed out:

37
38 "These people represent the majority, not the minority."

39
40 In order to better engage this majority, participants believed that climate change
41 communication activities needed to happen at other more 'regular' events. A local example
42 of a 'hate crime' awareness event that had a band and other activities and was not
43 advertised as a 'hate crime awareness event' was discussed as a good model, as it had
44 attracted a large cohort and generated effective and meaningful discussion. According to
45 one of the volunteers, Stockport used to have a very good local environment fair that did
46 communicate issues relating to sustainability and environmental change, in an accessible
47 manner and to a wide audience; this fair was allegedly very popular, but austerity and local

1 government cuts meant that it was cancelled. This failure of the local and central
2 government was a topic that was repeatedly brought up in this workshop, and there was a
3 strong belief that there was a need for policymakers and government to shoulder the
4 majority of the blame for the negative effects of climate change; as one participant put it:

5
6 “When will our social leaders agree to effect change and find ways to overcome
7 collective greed?”
8

9 Stockport is part of Greater Manchester, and Devolution to the Greater Manchester
10 Combined Authority (Copus et al., 2017) was seen by the participants as a great opportunity
11 for enacting positive change in terms of both equal rights and mitigating climate change.
12 The approach that was adopted by Ken Livingstone whilst he was the Mayor of London
13 (2000 – 2008) was stated as a good standard to follow (Shove and Walker, 2010), and the
14 participants hoped that Andy Burnham (the first Mayor of Greater Manchester) would use
15 his newfound responsibilities and power in a similar fashion. This discussion featured input
16 from SI and the other expert in terms of answering technical questions. However, neither SI
17 nor the expert acted in any way so as to persuade or dissuade any of the participants from a
18 particular way of thinking.
19

20 Following these initial discussions, two poems were written collectively by the participants.
21 On the subject of ‘How you feel about your local community’:
22

23 I think community is being lost, everyone's too busy.
24 I feel close to my community and part of it.
25 I feel like there are many selfish people
26 But there are people who help.
27 My community is a lonely concrete desert where desert flowers bloom,
28 sometimes,
29 if they catch a bit of warm rain.
30

31 And on the subject of ‘How you feel about climate change’:
32

33 Some will profit as suffering increases.
34 Sorry, sorry, sorry, sorry, sorry children of the future!
35 We have one Earth, if we don't save it, all else is lost.
36 I feel like if I give as hard as I could
37 My friends will live in a world that's good.
38

39 In discussing these two poems, the participants again returned to themes of social justice
40 and what was and was not perceived to be ‘fair’. They found it grossly unfair that a minority
41 of people were spoiling both their community and the local and wider environments for the
42 majority. They also discussed how despite this selfish minority, there were other people
43 who were acting as a force for good, and who could, and should, be relied upon to help
44 enact a positive change. As was the case with the Avonmouth poetry, both of these poems
45 were reflective of the previous discussions (although it was perhaps surprising that local and
46 national authorities, and their perceived failings in terms of austerity and sustainability,
47 were not explicitly mentioned). In particular, the last two lines of the collective poem about

1 climate change effectively summarised the prevailing mood of the group, which was
2 ultimately one of hope and empowerment. Rather than a burden that caused them to feel
3 belittled and helpless, the volunteers in the group saw it as an opportunity to provide the
4 support that was needed to help the unaware and the vulnerable, both within their own
5 community and beyond. As with the previous discussion, it became apparent that this
6 community was comprised of two distinct groups of people: the volunteers and carers, and
7 the people that they helped. Whilst certain circumstances dictated that some of the
8 participants spent time in both of these groups, the poetry that was created and the
9 subsequent discussions made it clear that any climate change communication strategy that
10 aimed to effectively work with this community must target both of these publics.

11
12 Given the restrictions that Disability Stockport, and other communities like them, have
13 faced because of funding cuts brought about by austerity measure in the UK (see e.g. Cross,
14 2013), it is perhaps unsurprising that the volunteers within this community are aware of the
15 responsibilities of both local and national government, and that they are willing to take
16 them to task on the matter. In contrast to the participants at the Avonmouth workshop they
17 did not express a restraining sense of guilt, but rather an acceptance that they could not,
18 and should not, be held individually responsible for the effects of climate change and our
19 attempts to mitigate these changes. This community is very firmly attuned to a sense of
20 justice, and they want to ensure that everyone has a strong and discernible voice in
21 discussing climate change, not least because they recognise that whilst many of their
22 members are contributing the least to climate change, they will be amongst the ones that
23 are most affected by it.

24
25 From the post-workshop questionnaire, the main questions that participants still had were
26 related to how they could help others (especially locally policymakers) to take collective
27 responsibility for their actions. The participants appreciated the “egalitarian, respectful, and
28 non-judgmental” creative approach to the workshop, and its success in “including disabled
29 people fully.” One request that was made was for links to local groups and information
30 relating to the communication of climate change to be made available, which further
31 corroborates the desire of the participants to help others take notice and “motivate those in
32 charge”.

33
34 This workshop demonstrated how important it is to fully consider the vulnerable members
35 of our society when thinking about how climate change and its effects are communicated.
36 As well as ensuring that any communication strategy is not just aimed at the ‘usual suspects’
37 it is essential that the carers are also well equipped with the tools and information to help
38 engender meaningful and unbiased debate on the subject. Furthermore, by giving these
39 communities a voice, any efforts to communicate the effects of climate change would stand
40 to benefit from a motivated collective that is willing to highlight issues of social injustice and
41 help to enact positive change.

42 43 3.3 Manchester Faith Communities

44
45 This workshop was conducted on a Thursday afternoon, and there were eight participants,
46 including the climate communications expert. The workshop took place in the refectory of
47 the Manchester Cathedral, with representatives from the Catholic Church, Protestantism,

1 Judaism, and the Bahá'í Faith. Each of these representatives were leaders within their faith
2 organisations and the initial discussions lasted approximately 80 minutes, with 60 minutes
3 spent collaboratively writing and discussing poetry.

4
5 Initial discussions with this group focussed on what was meant by the word 'community',
6 with participants discussing which communities they did and did not belong to. For the faith
7 leaders that were represented here, they all felt part of their faith communities, but also the
8 local communities where they lived, as well as more regional, national, and even global non-
9 faith communities. This attitude of belonging to a global community was summed up by one
10 participant:

11
12 "We all belong to the wider community of humanity. We all bleed red blood, we all
13 breathe the same air."

14
15 With regards to issues that were seen as pertinent to their local faith communities, the
16 environment and food awareness (i.e. food waste and food poverty) were highlighted and
17 discussed at length. All of the participants felt that these issues could be addressed in a
18 meaningful and effective manner by first better developing educational awareness around
19 these topics, and by promoting better interconnectedness, both between the communities
20 and across the topics of importance. As with the other two workshops, the importance of a
21 healthy environment was discussed at length, and all of the participants expressed (without
22 being prompted) that the effects of climate change were amongst the greatest issues that
23 they were currently tackling in both their local and wider faith communities.

24
25 This was a very informed group in terms of climate change and its effect on both individuals
26 and their wider communities. Given that this workshop was advertised as an opportunity to
27 discuss climate change, this might be expected, but as was revealed in the discussions,
28 many of the faith communities are already taking considerable steps to address the effects
29 of climate change at both a global and a more local level. Organisations and initiatives such
30 as Green Bishops (Dakin, 2004), the Public Issues Team at Methodist Church House (The
31 Methodist Church, 2012), and Pope Francis' *Laudato si* (Francisco, 2015) were all discussed
32 as both sources of inspiration and useful references for further information. From these
33 discussions it was apparent how each of these faith leaders belonged to a much larger
34 community that they could work with and on behalf of, and as with the volunteers within
35 the Disability Stockport community, these participants believed they had a duty of care to
36 help improve the environments of the more vulnerable members of their communities.
37 There was also an extended discussion about how many of the more vulnerable members of
38 these communities were seen as "problems that needed to be solved", whereas they should
39 instead be viewed as potential solutions to many of the issues facing the communities,
40 especially those surrounding the effects of climate change. As one of the participants noted:

41
42 "If people knew then they could make any informed decision."

43
44 Despite their own knowledge on the subject of climate change, and the resources that were
45 available to them through their faith communities, the participants still expressed a need for
46 reliable and unbiased information that they could then direct their communities to. All of
47 the participants believed that whilst the effects of climate change were going to have a

1 negative effect at both a global and local level, these challenges also presented an
2 opportunity to bring people together and empower the impoverished by working in unison
3 to tackle the negative effects of climate change. This discussion featured very little input
4 from SI and the other expert in terms of answering technical questions, and nobody acted in
5 any way so as to persuade or dissuade any of the participants from a particular way of
6 thinking.

7
8 Following the initial discussion, the participants were split into two groups of four, and
9 worked in these groups to create two sets of poems. Two on the subject of 'How you feel
10 about your local community':

11
12 Community is the space where we
13 are cherished and appreciated, a place
14 of encounter where all belong,
15 Supporting each other with a
16 common vision; we are a kaleidoscope of life.

17
18 And

19
20 I like my community - its resourceful people with familiar sparkling eyes of hope,
21 sensing potential to beautify.
22 Strangers need not feel alone
23 Where diverse community cherishes home.

24
25 And two on the subject of 'How you feel about climate change':

26
27 I have come to see that climate change affects us all
28 My consumption is at the expense of my neighbour's lack
29 And my recklessness may lead to my neighbour's danger
30 My careless lifestyle causing so much natural beauty to be lost
31 I sense the urgency that I change to help save the planet
32 For the future me that this haunts drives me, transfuses my life.

33
34 And

35
36 There are too many of us
37 Disposing of too much fare
38 Into our atmosphere and our world
39 We need to take more care,
40 Fossil industrial growth
41 That diminishes water soil and air
42 Grow to green and clean
43 To make the world more fair.
44 We need to change behaviour
45 It is urgent that we share,
46 The joy is living simply
47 Right here and not out there.

1 We must reduce the harm we cause
2 Both personal and corporate ware
3 A better carbon footprint
4 Before our world we tear.

5
6 These poems, and the discussions that followed, served to further highlight the congruence
7 between these participants. Unlike the participants in the Stockport and Avonmouth
8 workshops, this group did not all belong to one common community, but the similarities in
9 their beliefs with regards to their collective responsibility was striking. From these poems it
10 is clear that the faith leaders consider communities to be places of strength and belonging,
11 and that we should work hard to connect these communities so that nobody is ostracised; it
12 is the similarities between communities rather than their differences that should be
13 cherished and nurtured. These participants accepted their collective guilt with regards to
14 the effects of climate change, but also saw it as an opportunity to develop cohesion and
15 belonging amongst the most vulnerable. As with the Stockport group, they realised that
16 they had a responsibility, but saw this as something that was achievable rather than
17 overbearing.

18
19 Both of the poems written about climate change recognise that the negative consequences
20 to climate change (and any response to it) have come about because of an imbalance. The
21 line “My consumption is at the expense of my neighbour's lack” is very similar to the ideas
22 that were expressed by the Stockport group, i.e. that the privileged minority has been living
23 at the expense of the disadvantaged majority, and in many instances has been responsible
24 for maintaining and even strengthening that disparity. On reading the lines “There are too
25 many of us / Disposing of too much fare”, Thomas Malthus and the relationship between
26 population growth and climate change might initially spring to mind (Kelly and Kolstad,
27 2001). However, these lines should also be read alongside “The joy is living simply / Right
28 here and not out there”. It is not necessarily rapid reductions in population growth that are
29 being advocated in this poem, but rather the notion that we need to better consider exactly
30 what is meant by ‘sustainable living’ and the changes to our personal lifestyles that might be
31 necessary in order to mitigate the negative effects of climate change for everyone (Carley
32 and Spapens, 2017). These poems do not promise easy answers, and they also point to a
33 sense of immediacy, i.e. that something needs to be done now, and by the authors of these
34 poems, rather than waiting and hoping for a future solution or future author to present
35 itself.

36
37 As with the Avonmouth group, these poems (and the surrounding discussions) pointed to a
38 need for open and honest debate, and with it an interconnected approach to educating
39 people in a safe environment; one in which they felt welcome and cherished. Throughout all
40 of the discussions there was a willingness to assume collective responsibility, and a desire
41 amongst the participants to use their positions of responsibility to not only help their
42 communities, but to work together so that they might better tackle the negative effects of
43 climate change. As one of the participants noted:

44
45 “*It is about overcoming prejudices.*”
46

1 This comment was made in relation to how different faith communities could more
2 effectively work together, but it is also relevant in regards to the need to go beyond the
3 'usual suspects' when determining the audiences and the associated messages for the
4 effective communication of climate change.

5
6 From the post-workshop questionnaire, the response of the participants was similar to that
7 of the Stockport group, as they mainly wanted to know more information about "how to
8 inspire more behaviour change and faith-based action", with both groups explicitly wanting
9 to know how they could "activate hope". The participants enjoyed the creative elements of
10 the workshop and liked the "focus on participation" and the "fun and accepting" nature that
11 accompanied the "serious discussion". As with the Stockport group, they would have liked
12 some practical examples of what they could do to enact change, both within their faith
13 communities and beyond.

14
15 This workshop succeeded in bringing together a group of faith leaders from across
16 Manchester, to present a range of different faith perspectives in relation to climate change.
17 These are strong and interconnected communities that want what is best for all of their
18 members, but not at the expense of other more vulnerable members of society that might
19 not belong to their community. The participants in this workshop represented a well-
20 informed and powerful agent with regards to the effective dissemination and
21 communication of climate change and working with these faith leaders to develop dialogue
22 within and across their communities is something that should be better considered by
23 climate communication strategies.

24 25 4. Discussion

26
27 In reading these case studies, and by analysing the discussions and the poetry that were
28 generated in the workshops, it is evident that each of the three communities has a clear and
29 distinctive voice. These distinct voices mean that there are distinct challenges in effectively
30 developing dialogue around climate change, but as can be seen from Section 3, there are
31 also diverse opportunities in working *with* each of these communities to better develop this
32 dialogue.

33
34 In all three of the communities there was a sense of collective guilt, centred on a
35 recognition of personal responsibility; that we as individuals were at least partly to blame
36 for the negative effects of climate change that were observed at both an individual and
37 community level. However, how each of those communities reacted to notions of personal
38 and community responsibility was distinct and serves to highlight why a 'one-size-fits-all'
39 approach to communicating climate change, or even developing dialogue around the
40 subject, would not work. The participants in the Avonmouth workshop initially largely felt
41 overwhelmed and de-motivated by their guilt. So much had already gone wrong how could
42 they as individuals now help to set things right; it seemed like potentially an overwhelming
43 task, and they felt "Confused, conflicted, guilty, sad, helpless". But through discussions
44 amongst themselves and a sharing of that guilt they came to the realisation that they "have
45 a / responsibility to educate myself, live simply and do whatever / I can to affect positive
46 change". In order for a community like the Avonmouth Community Centre to enact positive

1 change, they need to be freed from any individual guilt, which itself has maybe been
2 deepened by previous (one-way) climate change communication efforts.

3
4 In contrast to the Avonmouth group, whilst the Stockport group also acknowledged their
5 guilt, they recognised that they were not solely responsible for the current negative effects
6 of climate change. Furthermore, they recognised that through their actions they could make
7 a positive difference: “I feel like if I give as hard as I could / My friends will live in a world
8 that’s good.” Contrast this to the “we can educate people / to the real statistics of what is
9 happening in our world” of the Avonmouth poem. There is a greater degree of certainty
10 (still not absolute) that they can enact positive change, both as individuals and as a
11 collective. In working with a community like Disability Stockport, effective communications
12 would likely highlight ways in which others (e.g. governments and policymakers) could be
13 held to account for their collective failings.

14
15 The community of faith leaders had a similar outlook to the Stockport group, recognising
16 that: “We must reduce the harm we cause / Both personal and corporate ware / A better
17 carbon footprint / Before our world we tear.” And that “To make the world more fair. / We
18 need to change behaviour”. As with the Avonmouth group, they also realised the need for
19 education, and given their own positions within their communities they recognised that any
20 initial activity likely needed to be driven by them. This was arguably a different type of
21 individual responsibility than was evidenced in the other two workshops, as the faith
22 leaders recognised that in some instances without their guidance and support for a
23 particular topic action might not be instigated or even possible. In working with this
24 community, it could be argued that effective climate change communications would provide
25 reliable resources and frameworks for engagement that could then be shared by the
26 individuals amongst their own communities and organisations. As was indicated by the
27 participants themselves during this discussion, their sense of community is intertwined with
28 their own religious worldviews, and as such several of these attitudes (e.g. ‘overcoming
29 prejudices’ and ‘addressing consumption’) might be driven by religious practices rather than
30 environmental concerns. It would also be interesting to further investigate what would
31 happen if recommendations for successful climate change mitigation strategies at the local
32 community level clashed with the religious ideologies or discourses of a particular group. As
33 Maxwell (2003, pp. 257) observed: “reductionist perceptions of reality are proving
34 inadequate for addressing the complex, interconnected problems of the current age”, and
35 in addition to the benefits of working with such groups in tackling climate change, it would
36 be worthwhile for future workshops to investigate the extent to which religious world views
37 potentially clashed with climate change communications, and how different faith leaders
38 reacted as a result.

Formatted: Font: Not Bold

Formatted: Font: Not Bold

Formatted: Font: Not Bold

39
40 The manner in which guilt about climate change was attributed, and the extent to which it
41 oppressed individual and collective action, is just one example of the different ways in which
42 these communities responded to climate change and how it is communicated. People’s
43 individual roles within these communities also need to be considered. For example, are they
44 resident or employee; volunteer or patron; faith leader or community member? These roles
45 may change depending on circumstance, and many of us belong to several communities, in
46 which we might have different roles and react accordingly. Given these different
47 communities and the roles within them, how do we go about categorising them in terms of

1 developing effective climate communications? Helm et al. (2018) have suggested using an
2 approach that splits people's values into egotistic, altruistic, and biospheric, but is even this
3 approach too broad? As noted by one of the participants in the Manchester workshop:

4
5 "Different people respond to different stimuli. Express themselves very differently,
6 so how to engage will vary according to the audience / psychological makeup of
7 hopes and fears."
8

9 By making generalisations about how to effectively communicate climate change we are
10 missing these reactions, and in doing so we are arguably contributing to a perceived malaise
11 on the subject. Furthermore, but not working at the community level we are missing out on
12 all of the opportunities that these communities (and their individuals) present in terms of
13 developing effective dialogue around the negative effects of climate change and mobilising
14 collective action against them. Whatever the theoretical perspectives on how people's
15 opinions and values can be categorised, they are typically unable to recognise the very
16 particular circumstances that are present in individual communities. Nevertheless, each of
17 the three communities in this study represent effective allies towards the mitigation of
18 climate change. The Avonmouth Community Centre were willing to engage their own
19 member base and wanted to depoliticise climate change so that they could educate their
20 community how best to combat its negative effects. Disability Stockport understood the
21 social injustice of climate change and were willing to bring to task local government in order
22 to protect the vulnerable. The Manchester faith leaders were eager to use their positions
23 within their own communities to educate, support, and enact change. These are all positive
24 experiences and opportunities, which serve to highlight the question of why we are not
25 working with these communities instead of telling them what they should be doing and how
26 they should be feeling.
27

28 The approach that was adopted in this study has helped to give voice to a small selection of
29 different communities, and in doing so has helped us to better understand why there is no
30 'one-size-fits-all' approach to communicating climate change. It also highlighted why two-
31 way dialogues are needed to help capture and understand these approaches, as opposed to
32 one-way communications which can instead instil negative feelings and attitudes. By
33 creating a safe space in which dialogue could take place, these workshops helped to
34 empower the community members, and in using poetry as part of the process the
35 participants were presented with a creative approach to solidify their thoughts and
36 communicate and discuss them with others. The poetry also acted as a powerful tool in
37 helping participants to explore the lifeworlds of their associates and enabled them to reflect
38 on what had been discussed and what they might decide to do in the future. Whilst poetry
39 can at times be perceived as elitist and 'difficult', these workshops demonstrated that given
40 the correct environment and facilitation, writing poetry can instead be accessible and
41 empowering. None of the workshops participants had any issues in composing their poems,
42 and indeed almost all of them took great joy in creating and sharing them.
43

44 The creative nature of these workshops was enjoyed by all of the participants and
45 demonstrates how poetry can play a powerful role in helping to develop effective dialogue
46 around climate change. During the workshops, several of the participants noted that this
47 kind of activity should be run elsewhere and that it was needed to help ensure that all

1 voices could be heard. Based on these experiences the following recommendations are
2 offered to people wanting to adopt a similar approach:

- 3
- 4 1. These workshops need to happen in the communities themselves. It is not desirable
5 (both in terms of logistics and the creation of a safe space) for these workshops to
6 happen at a university or even a neutral venue;
- 7 2. Any workshop questions or planned exercises should be passed to a community
8 representative or gatekeeper in advance of the workshop, so that provisions can be
9 made to be fully inclusive;
- 10 3. In order for everyone to be equally involved in the discussions an upper limit of 10
11 people, or 10 people per facilitator, would be advisable;
- 12 4. The role of the facilitator is not to be overlooked. This needs to be someone who can
13 respond to questions, support groups discussions, assist in poetry writing, and
14 quickly synthesise information. Several facilitators, each with a slightly different
15 specialism (e.g. poetry writing and group discussions) might be advisable;
- 16 5. Having regular breaks, and creating an informal atmosphere helps to breed creativity
17 and also reinforce the notion of a safe space for all.

18
19 As discussed in Section 1, we hoped that by involving climate communications experts in the
20 workshop, we could demonstrate first-hand to them the diverse nature of the audiences
21 and publics that there were communicating with. In conversations with the experts
22 following these workshops this was clearly the case; in all instances it was useful to have
23 someone who could not only provide statistics and in-depth information if required to do
24 so, but who could also offer an alternative opinion and voice in terms of their own
25 communities. In future workshops it might also be worthwhile to include a climate
26 communications expert who identified as also being part of the community group that is
27 being worked with, so as also to provide local information and an additional representative
28 voice.

29
30 This study is limited in its findings, in that we only report on the outcomes of three
31 workshops run in three different community groups. The findings would likely be very
32 different were these workshops to be run again but with different communities. However,
33 this further serves to underline the thesis of this study, i.e. that qualitative research at the
34 community level is an essential accompaniment to larger scale research projects that look at
35 the way in which climate change is communicated. One-off workshops were used in this
36 study, as we believe that it represents a model that could be most easily adopted by other
37 researchers and for other communities. Additionally, this study was not designed to monitor
38 the long-term impacts of these workshops; however, given the responses of the participants
39 (and in particular the comments made by the Avonmouth group – see Section 3.1), such a
40 study would likely yield interesting results. In addition to working with different
41 communities and monitoring any long-term impacts, future studies could also adopt a
42 similar approach to running workshops with several communities at a time. Furthermore,
43 future workshops could also involve an element of reading and discussing poetry that had
44 already been written (either by well-known poets, or by other communities in similar
45 workshops) about issues that the community identified as being important, as doing so
46 would allow participants to explore and discuss different perspectives and lifeworlds. As
47 demonstrated in this study, the collaborative poetry writing worked well in allowing

1 participants to explore each other's lived experiences in a creative and non-confrontational
2 manner. Such an approach would also likely be successful in helping to bring together
3 different (and perhaps opposed) communities by enabling them to discuss their lifeworlds in
4 this way, as was exemplified by workshop involving the Manchester faith leaders (see
5 Section 3.3).
6

7 5. Conclusion

8

9 This study has presented a framework for engaging communities in an effective dialogue
10 around the effects of climate change. In presenting the results of these discussions via three
11 case studies, we have also highlighted the need for such initiatives, both in terms of better
12 understanding the needs of these communities, and also the opportunities that they
13 present in mobilising effective action against the negative effects of climate change. In
14 addition to the specific needs and opportunities for each of these communities, this study
15 has also demonstrated how poetry can help community members to explore their own and
16 each other's lifeworlds in a creative environment, and in doing so has shown how
17 workshops such as these are an effective way of creating a safe space for discussion around
18 climate change.
19

20 This approach has also provided evidence for how a dialogue model can help to break down
21 some of the barriers that are created via one-way communication exercises. By creating a
22 safe space in which dialogue could be established and individual voices could be heard and
23 listened to, the perceptions of 'experts' changed from untrustworthy to valued and reliable
24 sources of information. In developing this dialogue, it is vital to also realise the different
25 roles that individuals play within different communities, and when working with carers and
26 other gatekeepers a consideration needs to be given to how they too can be supported in
27 developing their own effective dialogues.
28

29 The three communities in this study represent only a small fraction of the different
30 audiences and publics that need to be engaged with, in order to effectively develop a
31 dialogue around communicating climate change and bringing about the changes that are
32 needed for mitigation against its negative effects. The small-scale, creative, and personal
33 qualitative research that is presented here is essential to help contextualise and develop
34 larger impersonal quantitative work, demonstrating that whilst we are multitudes we are
35 also individuals, and that all voices should be listened to and taken into account. Such
36 engagement should not simply be done as a box-ticking exercise but should be encouraged
37 because diversity and inclusion acts as a powerful tool for empowering citizens and enacting
38 change (see e.g. Stevens et al., 2008). By telling individuals what they can and cannot do,
39 and how they can and cannot feel in relation to climate change, we are arguably
40 contributing to a feeling of collective guilt that can entrench feelings of defensiveness and
41 despair. By listening and giving voice to each of these communities we can not only help to
42 break down these barriers, but in doing so can benefit from their unique skill sets and
43 experiences as future allies in our battle against anthropogenic climate change.
44

45 Acknowledgements

46

1 The authors would like to thank and acknowledge all the participants in this study, including
2 the staff at Avonmouth Community Centre, Disability Stockport, and the Manchester
3 Cathedral for their help in making this project possible.

4
5 This work was supported by the Natural Environment Research Council (NE/R011974/1).

6 7 Author contributions

8
9 SI designed and delivered the workshops, analysed the responses, and co-wrote the paper.

10
11 AB, SC, AC, PF, RL, MLL, CM, HR, and ES helped design the workshops, analyse the
12 responses, and co-wrote the paper.

13 14 Competing financial interests

15
16 The authors declare that there are no competing financial interests. It should be noted that
17 the lead author for this paper is the chief executive editor of *Geoscience Communication*.
18 However, the editorial process was handled entirely by other editors and reviewers, just as
19 would be the case for any other researcher.

20 21 22 References

- 23
24 Bickerstaff, K.: Risk perception research: socio-cultural perspectives on the public
25 experience of air pollution, *Environment international*, 30, 827-840, 2004.
- 26 Büchs, M., and Schnepf, S. V.: Who emits most? Associations between socio-economic
27 factors and UK households' home energy, transport, indirect and total CO2 emissions,
28 *Ecological Economics*, 90, 114-123, 2013.
- 29 Burgess, J., Harrison, C. M., and Filius, P.: Environmental communication and the cultural
30 politics of environmental citizenship, *Environment and planning A*, 30, 1445-1460, 1998.
- 31 Burns, A. C., and Gentry, J. W.: Motivating students to engage in experiential learning: A
32 tension-to-learn theory, *Simulation and Gaming*, 29, 133-151, 1998.
- 33 Carley, M., and Spapens, P.: *Sharing the world: sustainable living and global equity in the*
34 *21st century*, Routledge, 2017.
- 35 Cook, J., Oreskes, N., Doran, P. T., Anderegg, W. R., Verheggen, B., Maibach, E. W., Carlton,
36 J. S., Lewandowsky, S., Skuce, A. G., and Green, S. A.: Consensus on consensus: a synthesis
37 of consensus estimates on human-caused global warming, *Environmental Research Letters*,
38 11, 048002, 2016.
- 39 Copus, C., Roberts, M., and Wall, R.: *Devolution Today: Revolution or Submission?*, in: *Local*
40 *Government in England*, Springer, 113-137, 2017.
- 41 Cross, M.: Demonised, impoverished and now forced into isolation: the fate of disabled
42 people under austerity, *Disability & Society*, 28, 719-723, 2013.
- 43 Crush, A., and Cameron, A.: *Community Energy Greater Manchester Summary Document*
44 *Greater Manchester Centre for Voluntary Organisation*, 2015.
- 45 Dakin, T.: Chimurenga: The War of the Trees, *Journal of Religion in Africa*, 34, 181-185,
46 2004.

1 de Franca Doria, M., Boyd, E., Tompkins, E. L., and Adger, W. N.: Using expert elicitation to
2 define successful adaptation to climate change, *Environmental Science & Policy*, 12, 810-
3 819, 2009.

4 Finley, M.: Fugue of the street rat: Writing research poetry, *International Journal of*
5 *Qualitative Studies in Education*, 16, 603-604, 2003.

6 Francisco, P.: *Laudato si, Sobre el cuidado de las Casa Común (Enciclica)*, 2015.

7 Frumkin, H., Hess, J., Luber, G., Malilay, J., and McGeehin, M.: Climate change: the public
8 health response, *American journal of public health*, 98, 435-445, 2008.

9 Furman, R., Riddoch, R., and Collins, K.: Poetry, Writing, and Community Practice, *Human*
10 *Service Education*, 24, 2004.

11 Goodwin, J., and Dahlstrom, M. F.: Communication strategies for earning trust in climate
12 change debates, *Wiley Interdisciplinary Reviews: Climate Change*, 5, 151-160, 2014.

13 Greenstone, M.: Did the Clean Air Act cause the remarkable decline in sulfur dioxide
14 concentrations?, *Journal of environmental economics and management*, 47, 585-611, 2004.

15 Helm, S. V., Pollitt, A., Barnett, M. A., Curran, M. A., and Craig, Z. R.: Differentiating
16 environmental concern in the context of psychological adaption to climate change, *Global*
17 *Environmental Change*, 48, 158-167, 2018.

18 Heltberg, R., Siegel, P. B., and Jorgensen, S. L.: Addressing human vulnerability to climate
19 change: toward a 'no-regrets' approach, *Global Environmental Change*, 19, 89-99, 2009.

20 Illingworth, S., and Jack, K.: Rhyme and reason-using poetry to talk to underserved
21 audiences about environmental change, *Climate Risk Management*, 19, 120-129,
22 <https://doi.org/10.1016/j.crm.2018.01.001>, 2018.

23 Kahan, D.: Why we are poles apart on climate change: the problem isn't the public's
24 reasoning capacity; it's the polluted science-communication environment that drives people
25 apart, *Nature*, 488, 255-256, 2012.

26 Kelly, D. L., and Kolstad, C. D.: Malthus and climate change: betting on a stable population,
27 *Journal of Environmental Economics and Management*, 41, 135-161, 2001.

28 Kitzinger, J.: Qualitative research. Introducing focus groups, *BMJ: British medical journal*,
29 311, 299, 1995.

30 Lorenzoni, I., Nicholson-Cole, S., and Whitmarsh, L.: Barriers perceived to engaging with
31 climate change among the UK public and their policy implications, *Global environmental*
32 *change*, 17, 445-459, 2007.

33 Maibach, E. W., Nisbet, M., Baldwin, P., Akerlof, K., and Diao, G.: Reframing climate change
34 as a public health issue: an exploratory study of public reactions, *BMC public health*, 10,
35 299, 2010.

36 Maxwell, T. P.: Integral spirituality, deep science, and ecological awareness, *Zygon®*, 38,
37 257-276, 2003.

38 Miller, S.: Public understanding of science at the crossroads, *Public understanding of*
39 *science*, 10, 115-120, 2001.

40 Moser, S. C.: Communicating climate change: history, challenges, process and future
41 directions, *Wiley Interdisciplinary Reviews: Climate Change*, 1, 31-53, 2010.

42 Norton, A., and Leaman, J.: *The day after tomorrow: Public opinion on climate change*,
43 *MORI Social Research Institute, London*, 2004.

44 Poindexter, C. C.: Research as poetry: A couple experiences HIV, *Qualitative Inquiry*, 8, 707-
45 714, 2002.

1 Poortinga, W., Spence, A., Whitmarsh, L., Capstick, S., and Pidgeon, N. F.: Uncertain climate:
2 An investigation into public scepticism about anthropogenic climate change, *Global
3 environmental change*, 21, 1015-1024, 2011.
4 Priest, S.: *Communicating Climate Change: The Path Forward*, Springer, 2016.
5 Ramírez, D. M., Ramírez-Andreotta, M. D., Veá, L., Estrella-Sánchez, R., Wolf, A. M. A.,
6 Kilungo, A., Spitz, A. H., and Betterton, E. A.: Pollution prevention through peer education: a
7 community health worker and small and home-based business initiative on the Arizona-
8 Sonora Border, *International journal of environmental research and public health*, 12,
9 11209-11226, 2015.
10 Shove, E., and Walker, G.: Governing transitions in the sustainability of everyday life,
11 *Research policy*, 39, 471-476, 2010.
12 Stevens, F. G., Plaut, V. C., and Sanchez-Burks, J.: Unlocking the benefits of diversity: All-
13 inclusive multiculturalism and positive organizational change, *The Journal of Applied
14 Behavioral Science*, 44, 116-133, 2008.
15 Swim, J., Clayton, S., Doherty, T., Gifford, R., Howard, G., Reser, J., Stern, P., and Weber, E.:
16 Psychology and global climate change: Addressing a multi-faceted phenomenon and set of
17 challenges. A report by the American Psychological Association's task force on the interface
18 between psychology and global climate change, American Psychological Association,
19 Washington, 2009.
20 The Environment Agency: Avonmouth: dust monitoring, The Environment Agency 2015.
21 Vygotsky, L. S.: *Mind in society: The development of higher psychological processes*, Harvard
22 university press, 1980.

23

24 |

Formatted: Justified

1 Appendix

2
3 *There is no demographic information on this questionnaire for two reasons. Firstly, it*
4 *assures that the responses are fully anonymised. Secondly, we are interested at*
5 *communicating with people as people, and as such generalisations relating to gender, race,*
6 *age, and any other socio-demographic factors should be discouraged.*
7

8 **Pre-Workshop Questions**

9
10 Write down three random words. This question is needed to help analyse the responses.

11
12 What are the three most important issues that need addressing in your community?

13
14 Does climate change affect your community?

15
16 Does climate change affect you?

17
18 What is climate change?

19
20 How do you think climate change is currently communicated?

21
22 What do you want to know more about with respect to climate change?

23
24 How would you find out this information?
25
26

27 **Workshop Questions**

28
29 Write a list poem about the things in your community.

30
31 Write down one sentence that captures how you feel about your community.

32
33 Combine this sentence with a neighbour.

34
35 Combine this pair of sentences with another pair

36
37 Write a list poem about climate change.

38
39 Write down one sentence that captures how you feel about climate change.

40
41 Combine this sentence with a neighbour.

42
43 Combine this pair of sentences with another pair.

44
45 Write down one question that you have about climate change.
46
47
48

1 **Post-Workshop Questions**

2

3 What did you like about this workshop?

4

5 What could we have done differently?

6

7 What is climate change?

8

9 What do you want to know more about with respect to climate change?

10

11 How would you find out this information?

12

13

14

15