

**A Case Study: Extinction Rebellion's Methods of
Climate Change Communication.**

**Anna Louise Bethany Fry
August 2019**

**Dissertation Submitted for the Master of Science
Communication.
Master of Arts.
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Introduction

In recent years the public has been made more aware of the science behind climate change and the consequences of the unprecedented damage inflicted on the planet we inhabit. While most of this information may come to many via a formal education at school, a scientific report discussed in the news, or perhaps a documentary or book produced by an academic on the subject, there has been a recent rise in a new form of communicating climate change awareness to the public. This is seen via the work of groups such as Greenpeace who act as activists against climate change in order to raise awareness of the problems our planet is facing.¹ In the course of the past year a new activist group has arisen taking on the task of generating positive climate action. This is the group Extinction Rebellion (XR), started in the UK but rapidly branching out to countries all across the globe.² This thesis takes XR as a case study with a view to understanding how groups such as these communicate their messages to the public. XR was chosen as they are relatively young in comparison to other well known, organised groups and so their progression and techniques can be clearly highlighted and followed. Despite only having made their debut in the public sphere towards the end of 2018, XR have already amassed a huge following of concerned people and find themselves the focus of many news sites and stations almost every week. This popularity and focus hints to their success in communicating their messages and getting noticed. With a view to understanding these successes this thesis will take a closer look at the motivations, aims and techniques of XR with the aim of demonstrating how their communication techniques are enabling them to achieve climate action attained by no other group before.

In order to study the successes of XR's communication techniques it is important to first understand the vision behind the group. This thesis will begin by taking a look at the origins of XR and the minds behind its creation. Understanding the origins of the group will help to bring more light into the techniques they use in order to achieve the targets they have set out. These targets come in the form of three demands which are presented clearly on the XR website and are often quoted in interviews and at protests.³ It is these demands, to tell the truth, to act now, and to form a citizens assembly, that form the driving factors of the group.⁴ Once the three aims have been outlined we can begin to look at the work conducted by XR with a view to what they hope to achieve from it. This includes their more noticeable work, forming protests and carrying out acts of civil disobedience, which gathers a huge amount of media attention, to their more subtle techniques such as their talks and online communities. While the protests and more

¹ 'About Greenpeace', *Greenpeace*, (n.d.) <<https://www.greenpeace.org.uk/about-greenpeace/>> [accessed 26/08/2019].

² 'About Us', *Extinction Rebellion*, (2019), <<https://rebellion.earth/the-truth/about-us/>> [accessed 26/08/2019].

³ 'Our Demands', *Extinction Rebellion*, (2019) <<https://rebellion.earth/the-truth/demands/>> [accessed 26/08/2019].

⁴ *Ibid.*

active work is discussed in Chapter One, alongside XR's vision and aims, their other work is discussed in Chapter Two. The reason for this separation is due to the fact that two techniques differ dramatically and may also appear to have a different audience. Whilst the protests are out in the world for all to see the communication techniques discussed in Chapter Two are more likely to be used by those already interested in climate issues as they must first seek XR out. There is no doubt that many of these seekers will have been drawn in by the protests or media attention and this is just one of the many successful techniques employed by XR. Finally, this study will break down the three demands of XR with a view to understanding the extent to which they have been successful in achieving these aims and how their achievements have been aided by their communication techniques.

Chapter One – The Rise of Extinction Rebellion

XR is an activist group concerned with the climate crisis currently being experienced. Started as a project by the movement Rising Up! it was hoped that XR would generate some positive change where climate issues are concerned.⁵ Rising Up! was founded in 2016 to tackle a number of global issues, climate change being one amongst many.⁶ The idea behind Rising Up! was to generate a change in both the political and economic spheres.⁷ It was hoped that these changes would result in a system that 'maximises well being and minimises harm'.⁸ Rising Up! aimed to achieve this systemic change through civil disobedience a tactic used by many past, and potentially future, movements.⁹ John Rawls describes civil disobedience as a 'public, nonviolent, and conscientious act contrary to law usually done with the intent to bring about change in the policies or laws of government'.¹⁰ Rawls goes on to discuss the ways in which this method of activism is civil in more than just the sense of acting with societies best interests in mind, but also because the act of expecting and accepting arrest. Rawls believes this shows a 'respect for legal procedures'.¹¹ This concept of civil disobedience has been carried forward from Rising Up! into the XR movement. Indeed, as of this year, 2019, Roger Hallam, one of the founders, has begun a PhD in civil disobedience to better understand the ways in which his work can help to make a change.¹² This demonstrates the kind of commitment to making a difference. There is something to be said about the fact that it is a method of activism he is studying rather than a subject such as climate science. As Roger Chartier states, it is not the books that make a revolution, but the ways in which they are used.¹³ Whilst this is taken slightly out of context, it can be applied to the climate events currently being experienced and the work of XR. Just studying the events themselves does not cause people to rise up and act, but the way in which the events are used to educate and drive people to act on the crisis and their own involvement in causing it may. It is not necessary for action to come from academic specialists, XR as a movement demonstrates this very well and the matter will be discussed in further detail throughout this thesis. The importance therefore, is about whether an individual, any individual, cares enough about something to take the necessary steps to generate change, and in order to care it is detrimental that the issues must be correctly and successfully communicated to the masses.

⁵ 'FAQS', *Extinction Rebellion*, (2019) <<https://rebellion.earth/the-truth/faqs/>> [accessed 26/08/2019].

⁶ *Ibid.*

⁷ 'Why are we Rising Up!?', *Rising Up!*, (n.d.) <<https://risingup.org.uk/about>> [accessed 26/08/2019].

⁸ *Ibid.*

⁹ *Ibid.*

¹⁰ John Rawls, 'The Justification of Civil Disobedience', in *Arguing about Law*, ed. by Aileen Kavanagh, John Oberdiek (Routledge, 2009), pp. 244-253 (p. 247).

¹¹ *Ibid.*, p. 248.

¹² Sandra Laville, 'Extinction Rebellion founder cleared over King's College protest', *The Guardian*, (9th May 2019), <<https://www.theguardian.com/environment/2019/may/09/extinction-rebellion-founder-cleared-over-kings-college-protest>> [accessed: 26/08/2019].

¹³ Roger Chartier, *The Cultural Origins of the French Revolution*, 6th edn (Durham: Duke University Press, 2004), p. 67.

The minds behind XR are credited as being those of Dr Gail Bradbrook and Hallam.¹⁴ Both Bradbrook and Hallam are the current directors of Rising Up! along with a third member, George Barda.¹⁵ While both Bradbrook and Hallam are both highly academically educated neither are qualified climate scientists and yet the movement started by them to tackle climate issues is arguably making more progress than any climate scientist to date.¹⁶ When comparing terms 'Extinction Rebellion' to 'IPCC report' in online search engine statistics, the success of XR in gathering public interest is made clear. In England alone these search terms are split with 94% to 'Extinction Rebellion' and 6% to 'IPCC report'.¹⁷ XR have done an extraordinary job in gathering the attention of the general public, attendance to one of their popular talks demonstrates this as members in the audience, and those delivering the speeches, come from all walks of life. They are the worried mothers, concerned fathers, politicians, young students, the list is endless. This raises an important question of who is best suited to communicate science to the public, is it the scientists themselves or anyone with the drive to educate and inform?

Many handbooks and studies approaching the topic of science communication discuss it in terms of how best for scientists to communicate their work to the public.¹⁸ This public may encompass a large variety of people ranging from children to government officials. As would be expected there are many different approaches as how best to communicate to these different audiences. To complicate matters further each of these groups can be split into various other subgroups. This is summarised clearly by a study in 2014 conducted to analyse the public attitudes towards science.¹⁹ The study itself provided important information for science communicators, and perhaps most interestingly highlighted six different areas of public interest in learning about science.²⁰ These ranged from 'confident engagers' at one end of the spectrum to 'disengaged sceptics' at the other.²¹ Understanding these different groups that make up the public is important when thinking about how scientific knowledge is imparted to them as each will require a different type of engagement. Despite this, XR appear to be

¹⁴ 'FAQS' <<https://rebellion.earth/the-truth/faqs/>> [accessed 26/08/2019].

¹⁵ *Ibid*.

¹⁶ 'About Us', *Rising Up!*, (n.d.) <https://risingup.org.uk/about-us> [accessed 26/08/2018].

Laville <<https://www.theguardian.com/environment/2019/may/09/extinction-rebellion-founder-cleared-over-kings-college-protest>> [accessed 26/08/2019].

¹⁷ 'Google Trends', *Google*, (2019) <<https://trends.google.com/trends/explore?geo=GB&q=extinction%20rebellion.ipcc%20report>> [accessed 07/07/19].

¹⁸ Michael Shortland and Jane Gregory, *Communicating Science: A Handbook* (Essex: Longman Scientific and Technical, 1991), p. 3.

¹⁹ Sarah Castell, Anne Charlton, Michael Clemence, Nick Pettigrew, Sarah Pope, Anna Quigley, Jayesh Navin Shah, and Tim Silman, 'Public Attitudes Towards Science 2014', *Ipsos MORI Social Research Institute*, (March 2014) <<https://www.ipsos.com/sites/default/files/migrations/en-uk/files/Assets/Docs/Polls/pas-2014-main-report.pdf>> [accessed: 26/08/2019].

²⁰ *Ibid*, p. 17.

²¹ *Ibid*, pp. 17-18.

reaching a wide range of the public even without changing their tactics for different groups. Successfully achieving what may scientists themselves admit they are incapable of doing.²² In order to understand why XR are seemingly so successful in their communication, it is essential to analyse how and why they are doing so.

Before delving into the ways in which XR communicate climate science to the public, it is important to first consider some of the theory behind science communication and the acceptance of fact by society. James Secord discusses the way in which communication plays an important role not just in the education of science but also in its making.²³ Scientific fact does not simply exist but there are a number of complex social processes required for it to come into being.²⁴ It is now widely accepted as a scientific fact throughout the world that climate change is a very real issue, bar the few fringe extremist groups. Despite this, the latest research demonstrates that we as individuals, larger corporations, and world governments are not doing enough to prevent irreversible damage to the world we inhabit and so it would seem we are not as educated on this topic as we would like to believe.²⁵ XR are working hard to not only educate the public about the correct facts about the climate crisis but also on how their own actions should be changed to help fight this. This act of imparting knowledge to the public in turn, it is hoped, will generate a positive change within society where the science surrounding our planet's climate is accepted as fact and acted on accordingly.²⁶ In order for this to happen, successful communication needs to take place and the vast majority of society needs to act in a certain way that demonstrates that we accept the scientific data as fact. While scientists can work to secure data that demonstrates rising global CO2 levels, without the correct communication society will continue as before. This is why it is essential for the communication of such information, and why groups such as XR are so important in our society. It requires a large shift in the public understanding to generate a change in behaviour and a change is what is needed.

As already demonstrated, XR are far more successful at communicating the serious nature of climate science than the climate scientists themselves. This is due to the complex nature of communicating something to a mass audience in which the intended message can often be misunderstood by the audience.²⁷ Despite the nature of science

²² MORI, 'The Role of Scientists in the Public Debate', *The Wellcome Trust*, (February 2011)

<<https://www.ipsos.com/sites/default/files/migrations/en-uk/files/Assets/Docs/Archive/Polls/wellcome-main.pdf>> [accessed 26/08/2019], p.31.

²³ James Secord, 'Knowledge in Transit', *Isis*, 95.4 (The University of Chicago Press, December 2004), 654-672 (p. 661).

²⁴ 'Using Science to Improve Science Communication', *Communicating Science Effectively: A Research Agenda*, (8th March 2017), [online] <<https://www.ncbi.nlm.nih.gov/books/NBK425715/>> [accessed 26/08/2019].

²⁵ 'EU' *Climate Action Tracker*, (June 2019) <<https://climateactiontracker.org/countries/eu/sources/>> [accessed 26/08/2019].

²⁶ 'About Us' <<https://rebellion.earth/the-truth/about-us/>> [accessed 26/08/2019].

²⁷ Eilean Hooper-Greenhill, 'Communication in Theory and Practise', *The Educational Role of the Museum*, 2nd edn. by Eilean Hooper-Greenhill (London: Routledge, 1994), pp.28-43 (p. 29).

communication being focused at scientists being able to impart knowledge of their work to the wider population, it does not work this way in reality. This is shown in the deficit and dialogue models in the communication of science.²⁸ In its most simple terms the deficit model of science communication sees the transfer of knowledge running from the experts straight to the public (in this case being all those considered non-experts in the field).²⁹ This model fails to take into account a number of different aspects and institutions that make up the society of today. The dialogue model, however, is a little more complex. In this model, communication is not a one-way system. Here there is a conversation or discussion between certain groups within society, including the experts themselves, the media, the general public, the government etc.³⁰ This model of communication is in line with the theories of Bruno Latour, who states that knowledge is a social process, and reflects the way in which XR works to impart and share knowledge.³¹ One of the main ways in which they do this is through talks, that they regularly give to groups of anyone who wishes to attend, and their online activities. These talks are all based around the same scientific data and yet can be given by a wide variety of people, and to a wide variety of audience. There are also opportunities at these talks to ask questions and discuss issues and thoughts with attendees and this is furthered on their social media pages. Despite this relatively fluid way of mass communication the basic scientific data remains the same, yet a discussion can still be held between people and views from everyone can be shared.

When looking at the aims of XR their use of the dialogue model in communicating climate science becomes ever clearer. The aims are set out clearly on the organisations website and are boiled down to three main demands.³² These are: for the government to declare an ecological and climate emergency, for the government to put policies in place to reduce greenhouse gas emissions to net zero by 2025, and for there to be the creation of a citizens assembly.³³ All three of these aims set out by XR will require a great deal of systemic and governmental change and in order for this to happen, the education of the public and members of the government is essential. This is why XR's communication of climate facts is so important, not only to educate people on the existing issues, but also to explain what must be done and what changes need to be made. These changes do not just involve the big corporations, who do undoubtedly contribute most to the climate crisis.³⁴ The changes will involve every single one of us. In fact, many of the aims themselves can be seen as communicative methods. For the government to declare a

²⁸ Ally Faller, 'Dialogue Vs. Deficit: Strategies for Science Communication', *University of Colorado Boulder*, (13th May 2019) <<https://www.colorado.edu/earthlab/2019/05/13/dialogue-vs-deficit-strategies-science-communication-0>> [accessed 26/08/2019].

²⁹ *Ibid.*

³⁰ *Ibid.*

³¹ Bruno Latour and Steve Woolgar, *Laboratory Life: The Construction of Scientific Facts* (Princeton University Press, 1986), p. 32.

³² 'Our Demands' <<https://rebellion.earth/the-truth/demands/>> [accessed 26/08/2019].

³³ *Ibid.*

³⁴ Paul Griffin, 'The Carbon Majors Database: CDP Carbon Majors Report 2017', *CDP* (July 2017), p. 5.

climate emergency is a way of communicating the severity of the current state of our climate to others. The second aim, to introduce policies to reduce emissions to net zero, would serve as a form of communication in that it would educate the public in how they should change their behaviours to help combat climate change. It does, however, also require the facts of climate change to be communicated prior to this, as life changing policies would not be accepted by the masses without the relevant information explaining why. It is also unlikely that policy makers would be willing to risk losing the support of the public by making dramatic changes without first knowing that voters were aware of them and willing to make the changes happen. The third and final aim, to bring about the creation of a citizen's assembly, implies a certain level of understanding about climate science amongst the general population, which again must be brought about by the successful communication of this information.

The making of government policy should be an important focus of those hoping to successfully communicate science. As shown with the citizens assembly in Ireland, the public play a huge role in the making of policy and although some of XR's aims may seem daunting and out of reach, history has shown that the public can create large changes. Several studies have shown that generating too much fear discourages action due to the fact that people feel that they cannot have a positive impact.³⁵ XR works hard on disproving this, and although many label their techniques as alarmist, they are strong advocates for educating people on the things they can do in their everyday life. XR do this through a number of different ways, which will be discussed in more detail later, but their demand for a citizen's assembly highlights this well. One of the main functions of a citizens assembly is for a group, representative of society to discuss matters, in this case of climate importance, and propose solutions and actions.³⁶ Citizens assemblies demonstrate the power of the people first hand as their input on government policy can clearly be seen through their ability to break a political deadlock on matters of importance.³⁷ They are also at a unique position of trust as being representatives of society, the general public supports them in ways that they could not support alienated political figures. Agustí Nieto-Galan highlights the current 'mistrust [amongst the public] in the expert, or the scientific or political authority' in matters relating to the environment.³⁸ This distrust in those of scientific and political authority is potentially harmful to scientific progress in areas relating to the climate and highlights the importance of XR's third demand. In addition, those in positions of political authority trust the citizens assemblies to demonstrate what the people want without risking losing support from voters. This gives 'decision makers increased confidence that they have broad public support'. None of this, in the case of XR's demand for an assembly,

³⁵ James S. Risbey, 'The New Climate Discourse: Alarmist or Alarming?', *Global Environmental Change*, 18.1 (February 2008), 26-37 (p.32).

³⁶ 'Our Demands' <<https://rebellion.earth/the-truth/demands/>> [accessed 26/08/2019].

³⁷ *Ibid.*

³⁸ Agustí Nieto-Galan, *Science in the Public Sphere: A History of Lay Knowledge and Expertise* (Oxford: Routledge, 2016), p. 211.

would be possible without successful campaigning and communication from XR themselves. It is necessary for the issue of climate change to have gathered enough support, or distress, and for people to be aware of the actions they can take, and motivated to do so. This is only achieved through the proper engagement and education of the scientific facts. It is also important that the proper communication of the facts is not only made to the general public but also government officials. It is after all the policy makers that can implement some of the largest changes.

Of the three demands made by XR the first two, to tell the truth and to act now, seem to be intrinsically linked with the third, for the creation of a citizens assembly.³⁹ For the government to declare a state of climate and ecological emergency and for them to halt biodiversity loss and greenhouse gas emissions, they must recognise the problem is big enough, and inclusive of us all, to constitute the creation of a citizens assembly. The first two aims set out by XR are also only possible via political support. This is where a citizens assembly almost certainly would guarantee success as it would break the political stalemate that we are currently seeing in the ruling of climate issues.⁴⁰ A citizens assembly, although having a heavy political influence is essentially breaking the cycle of politics as its unique makeup of a public representative means that it remains politically unbiased and therefore can rule with societies best interests in mind.⁴¹ It is clear that there needs to be a direct and successful communication of the facts surrounding climate science to the public and politicians in order for XR to be successful in achieving these three aims. As of such, many of their techniques revolve around educating and raising awareness. Perhaps one of their most well-known, and indeed most controversial method, is their protests and acts of civil disobedience. XR have been growing in popularity at an alarming rate ever since their creation due to these protests.⁴² This kind of growth and public uprising puts an enormous amount of pressure on the government to fulfil the demands of groups such as XR.

The protests and acts of civil disobedience carried out by XR draw an incredible amount of public attention to the group. Not only do their public acts disrupt and draw attention from those who interact with the group by way of going about their daily lives but the protests also draw a lot of media attention.⁴³ XR has said about 3.5% of support is needed from the general population for them to succeed in achieving the aims they set out and are protesting for.⁴⁴ This statistic is gathered from examples throughout

³⁹ 'Our Demands' <<https://rebellion.earth/the-truth/demands/>>

⁴⁰ *Ibid.*

⁴¹ *Ibid.*

⁴² Matthew Taylor and Molly Blackall, 'Support for Extinction Rebellion Soars after Easter Protests', *The Guardian*, (24th April 2019) <<https://www.theguardian.com/environment/2019/apr/24/support-for-extinction-rebellion-soars-in-wake-of-easter-protests>> [accessed 26/08/2019].

⁴³ Chris Mcandrew, 'Extinction Rebellion Founder Gail Bradbrook: 'we're making people's lives miserable but they are talking about the issues'', *The Times*, (19th April 2019) <<https://www.thetimes.co.uk/edition/news/we-re-making-people-s-lives-miserable-but-they-are-talking-about-the-issues-d9hxc53z>> [accessed 26/08/2019].

⁴⁴ 'Act Now', *Extinction Rebellion*, (2019) <<https://rebellion.earth/act-now/>> [accessed 26/08/2019].

history, a popular example often referenced by XR being that of the civil rights movement.⁴⁵ One problem with this is the difference in the issues being protested here. The civil rights movement, following figures such as Martin Luther King, Malcom X, and Rosa Parks, saw the fight against racism that was strife within America at this time. Protests were peaceful, and often included acts of civil disobedience and yet the issue being fought here was clear for all to see. Segregation, whites only areas, and the blatant racism encountered on the streets daily, those fighting for equal rights amongst all races were not fighting an invisible enemy.⁴⁶ This is not in any way to downplay the fight that had to be won, and still very much continues today, but simply to highlight the issue with comparing the fight for civil rights with the fight against climate change. XR have a very different battle to win. Many of the aspects in their journey to victory may bare similarities to past troubles the enemy here is much less clear, especially to those living in the UK, where most of the XR members are currently based.

While history can tell us that acts of civil disobedience do work to generate change, we must question how this can be applied to the fight against climate change. It is important to look at the 3.5% figure set out by XR as the fight against climate differs greatly to those fought in the past.⁴⁷ Even when looking at other climate battles, such as the hole in the ozone layer, the perceived 'enemy' is very different. In this case images of large holes in a protective layer of the ozone were used to motivate people into stop using aerosols containing chlorofluorocarbons.⁴⁸ The solution to the problem here was also very clear, it required simple action that resulted in little to no impact to the lives of those who had to change. Climate change on the other hand, has a long and complex history in its communication and it still very much a debated topic by some social groups. The Intergovernmental Panel on Climate Change (IPCC), started in 1988, discusses the science of climate change and suggest responses to the issues that were starting to be understood by the wider population.⁴⁹ Despite this, today in 2019, we are facing a climate crisis that could result in the sixth mass extinction, ending life as we know it.⁵⁰ This crisis cannot be explained with a simple diagram showing a hole in the atmosphere, neither can the impact of such catastrophe be easily communicated.⁵¹ The climate events that we are already starting to see are large in number all interlinking and causing knock on effects. The XR website alone lists nine different disasters caused

⁴⁵ 'FAQS' <<https://rebellion.earth/the-truth/faqs/>> [accessed 26/08/2019].

⁴⁶ 'American Civil Rights Movement' *Encyclopaedia Britannica*, (11th July 2019) <<https://www.britannica.com/event/American-civil-rights-movement>> [accessed 26/08/2019].

⁴⁷ 'Act Now' <<https://rebellion.earth/act-now/>> [accessed 26/08/2019].

⁴⁸ 'Hole in ozone layer has shrunk thanks to worldwide ban of CFCs, Nasa confirms', *The Times*, (n.d.) <<https://www.telegraph.co.uk/science/2018/01/05/hole-ozone-layer-has-shrunk-thanks-ban-cfcs-nasa-confirms/>> [accessed 26/08/2019].

⁴⁹ 'About the IPCC', *IPCC*, (n.d.) <<https://www.ipcc.ch/about/>> [accessed 26/08/2019].

⁵⁰ 'The Emergency', *Extinction Rebellion*, (2019) <<https://rebellion.earth/the-truth/the-emergency/>> [accessed 26/08/2019].

⁵¹ Vox, 'Why humans are so bad at thinking about climate change', *YouTube*, (19th April 2017) <<https://www.youtube.com/watch?v=DkZ7BJQupVA&t=43s>> [accessed 26/08/2019].

by the climate crisis.⁵² Not only are the impacts large in number and effect, but the required action is also extremely complex and demands a dramatic change in the way we live our everyday lives. It is simply not enough to say no to a plastic straw, but extreme action is needed in order to combat an extreme issue. XR are aware of this but communicating this to the public is only the start of a very difficult battle against the damage we have already done our planet.

Despite XR embarking on, what may seem an impossible challenge, to educate the public about the climate crisis and the ways in which they must change their actions in order to fight it, their protests are proving to be a successful way of doing so. Although the issue being tackled here is incomparable to past struggles fought by similar methods, it does not mean that a similar tactic will not work. The idea behind gaining only 3.5% support may work as a means of 'pluralistic ignorance' whereby which due to the increased attention this minority receive the general perception of society is that the viewpoints presented by XR are those of the majority.⁵³ This is particularly important when thinking about policy makers as they will side with the perceived majority of voters. As already discussed, the protests themselves are very successful in drawing a lot of attention towards XR and the messages they are communicating.⁵⁴ In addition to this attention the protests of XR may be seen to be successful due to their peaceful nature. XR make it clear that their protests, whilst causing general disruption, should never cause anyone any harm.⁵⁵ Violence has a tendency of alienating people and turning them away from the cause, it also generates a negative atmosphere in which crime flourishes as people seize the opportunity to create trouble for reasons that may not be true to the initial cause. This was seen in the 2011 riots across England triggered when protests about the death of Mark Duggan turned violent.⁵⁶ By keeping the protests peaceful XR reduce the alienation of the public but also reduce the chances of negative media coverage. This allows their messages about the climate crisis to take the forefront rather than any disruption they may be causing. A peaceful approach also makes for a more accepting group, and members often comment on how welcoming they felt when first joining in on an XR protest.⁵⁷ XR also have a strong support system in place increasing the chances that members will be willing to put themselves on the line for potential arrest, and do the most they would feel comfortable doing.⁵⁸

⁵² 'The Emergency' <<https://rebellion.earth/the-truth/the-emergency/>> [accessed 26/08/2019].

⁵³ Deborah Prentice, 'Pluralistic ignorance', in *Encyclopedia of social psychology* ed. by R. F. Baumeister & K. D. Vohs, 1 (2007) p. 674.

⁵⁴ Taylor and Blackall <<https://www.theguardian.com/environment/2019/apr/24/support-for-extinction-rebellion-soars-in-wake-of-easter-protests>> [accessed 26/08/2019].

⁵⁵ 'About Us' <<https://rebellion.earth/the-truth/about-us/>> [accessed 26/08/2019].

⁵⁶ 'England Riots: Maps and Timeline', *BBC*, (15th August 2011) <<https://www.bbc.co.uk/news/uk-14436499>> [accessed 26/08/2019].

⁵⁷ Extinction Rebellion, 'Vox Pop Great', *YouTube*, (22nd April 2019) <<https://www.youtube.com/watch?v=X79g-LwrGyg&list=PLnZA40Blbb2kRLvU7E1Rte75tiVpIkctS&index=8>> [accessed 24/07/2019].

⁵⁸ 'Wellbeing', *Extinction Rebellion*, (2019) <<https://rebellion.earth/act-now/resources/wellbeing/>> [accessed 26/08/2019].

As has been made clear the protests and acts of civil disobedience held by XR bring in a lot of media attention. The reports made by the media on XR cannot be controlled or influenced entirely by XR themselves and therefore somewhat takes this area of communication out of their hands. It is, nonetheless, important to consider as a vital part of XR and their communication of the climate facts as it is due to their actions and making the issue so public that these reports exist and are appearing in such great numbers. The amount of news coverage gained by XR alone is a testament to how successful they are at putting themselves out there. It does not, however, necessarily mean that they have been successful in communicating the facts that they wish to. As is commonly known amongst scientists, the trouble of relying on the media to communicate certain topics to the public is the issue of miscommunication.⁵⁹ XR try to control this to a certain extent by appearing in live interviews and conducting their own press releases.⁶⁰ To do this effectively XR have a strong online presence, which will be discussed in more detail later. This includes a press section on their own website, along with a strong social media presence where they can share their own news stories, and a YouTube channel in which they can upload their own promotional videos.

Despite XR's own output of media content, most of those who are not aware of the group, or do not show a strong interest, will likely gain their information about them from more mainstream media sites and videos. The top three news sites used in the UK currently are listed as BBC news, The Guardian, and the Daily Mail.⁶¹ A simple search of the term 'Extinction Rebellion' on each of these sites brings up a large number of stories all differing in their approach and opinion of XR and the tactics with which they use. Some, as can be expected, are disproportionately more negative than others which highlights some of the potential issues XR face with the communication of their messages. If the mass media coverage is more negative than positive, then XR may face the very real issue of their own message becoming lost in the hate generated by different platforms. This is an issue climate activist Greta Thunberg addressed recently after claims were made about disagreements within the youth climate group 'Smile for Future' when she personally advocated a temporary media ban on the groups final meeting in early August 2019.⁶² Indeed XR have addressed the fact that negative coverage is unavoidable when acting within such a public sphere.⁶³

⁵⁹ Allan Bell, 'Media (mis)communication on the science of climate change', *Public Understanding of Science*, 3.3 (July 1994), 259-275 (p.259).

⁶⁰ 'Press', *Extinction Rebellion*, (2019) <<https://rebellion.earth/press/>> [accessed 26/08/2019].

⁶¹ 'Top 50 News Websites to Follow in 2019', *Feedspot*, (17th January 2019) <https://blog.feedspot.com/uk_news_websites/> [accessed 13/07/2019].

⁶² 'Greta throws journalists out of Climate Summit', *The Global Warming Policy Forum*, (9th August 2019) <<https://www.thegwpf.com/green-mini-dictator-greta-throws-news-journalists-out-of-climate-summit/>> [accessed 14/08/2019].

⁶³ 'FAQS' <<https://rebellion.earth/the-truth/faqs/>> [accessed 26/08/2019].

The issue of negative press becomes more of a treat as XR rise in popularity. More recently, news headlines have seen their likes of stories such as Bradbrook, one of XR's founding members being quoted as saying she wants a mass protest over the legalisation of drugs in which rebels would take psychedelics.⁶⁴ Although XR has no hierarchy the focus on a more senior member, such as Bradbrook, has the potential to undermine the group. As with this example taking psychedelics has little to do with the climate and yet Bradbrook is often picked out by the press as being a 'hippy-type' who is quite open about her use of drugs in the past.⁶⁵ The issue here is not really with her taking drugs but it is a clear attempt to alienate those who are part of XR and the group's work as work of a fringe, extremist collective somehow different from the rest of society. As already discussed, it is not the aim of XR to appeal to everyone, they have often stated their target of 3.5% of the population.⁶⁶ This, however, could bring up potential problems as the issue of climate will involve the population as a whole. It therefore stands that the majority, if not the whole of society should be on board with the changes that are required to happen to prevent the climate from spiralling out of control, changes XR advocate themselves.

Despite the very real possibility of negative press it is important to address the fact that XR are to date very successful at putting themselves out in the public sphere. This is essential in their communication to the wider public as they need to gain the public's attention before they can be successful in communicating any new ideas or thoughts. As XR has grown, so has the media coverage of their actions. When searching the term 'Extinction Rebellion' on the BBC website the earliest result brought up is from December of 2018 when the movement was just starting out.⁶⁷ During the month of December 2018 the BBC released fourteen different stories containing the term 'Extinction Rebellion'.⁶⁸ If this is compared to the most recent month just past, July 2019, there are a total of 78 results.⁶⁹ More interestingly, however, is the month of April 2019 with XR held an international rebellion. For the month of April 2019 there are a grand total of 212 results on the BBC site.⁷⁰ This demonstrates the way in which the protests held by XR are extremely successful in drawing attention towards the movement. Despite the fact that some of this media attention may be negative in nature it is attention nonetheless a 2017 report highlighted the fact that media attention on

⁶⁴ Sam Wong, 'Extinction Rebellion founder calls for mass psychedelic disobedience', *New Scientists*, (19th August 2019) <<https://www.newscientist.com/article/2213787-extinction-rebellion-founder-calls-for-mass-psychedelic-disobedience/>> [accessed 24/08/2019].

⁶⁵ Susannah Butter, 'Extinction Rebellion's co-founder on bringing London to a standstill', *Evening Standard*, (23rd July 2019) <<https://www.standard.co.uk/lifestyle/london-life/extinction-rebellion-co-founder-gail-bradbrook-interview-a4196266.html>> [accessed 26/08/2019].

⁶⁶ 'Act Now' <<https://rebellion.earth/act-now/>> [accessed 26/08/2019].

⁶⁷ 'Extinction Rebellion search results', *BBC*, (n.d.) <https://www.bbc.co.uk/search?q=extinction+rebellion&sa_f=search-product&scope=#page=24> [accessed 27/07/2019].

⁶⁸ *Ibid.*

⁶⁹ *Ibid.*

⁷⁰ *Ibid.*

particular topics influences ‘what the public perceives as most pressing and important’.⁷¹ In this way mass media can influence the topics we care about by drawing them more frequently to our attention making us believe they are of higher importance. This is essential to a movement like XR as even when the news coverage is negative it is bringing their work to the eyes and minds of the general public increasing the chances that XR’s own messages will be heard.

The process of mediatisation is not the only important for the communication of XR’s message to the public, but it is also important in the world of science. Stig Hjarvard defines mediatisation as a process by which the ‘media...[develops] into an independent institution in society and as a consequence, other institutions become increasingly dependent on the media and have to accommodate the logic of the media in order to be able to communicate with other institutions and society as a whole’.⁷² While the influence of the media on the public and political spheres is clear Nieto-Galan touches on the influence within the scientific sector.⁷³ Nieto-Galan states that the ‘media circus’ surrounding certain environmental topics has ‘reduced the room available for the supposed scientific authority of the experts’.⁷⁴ This may help to explain why non-scientific groups such as XR have had more success in communicating the current climate emergency than academics in this subject. Their protests and acts of civil disobedience generate more news coverage than a scientific report on CO2 emissions. As a result, more noise is generated and this then reflects back to the interest of the public, political and scientific spheres. Bart Simon discusses the ways in which the media has an influence on ‘what goes on in the laboratory’ suggesting that the more media coverage a certain topic gets the more incentive there is to study it in the laboratory.⁷⁵ This whole process encompasses the dialogue model discussed earlier but also demonstrates XR’s successful tactic of generating media attention as a way of educating the non-scientific public about climate change while also generating more drive for the scientific community to study it future and develop more ways of fighting the crisis the planet is facing.

⁷¹ ‘Communicating Science in a Complex, Competitive Communication Environment’, *Communicating Science Effectively: A Research Agenda*, (8th March 2017), [online] <<https://www.ncbi.nlm.nih.gov/books/NBK425709/>> [accessed 26/08/2019].

⁷² Stig Hjarvard, ‘The Mediatization of Religion: A theory of the media as agents of religious change’, *Northern Lights*, 6.1 (2008), 9-26 (p. 11).

⁷³ Nieto-Galan, *Science in the Public Sphere*, p. 194.

⁷⁴ *Ibid.*

⁷⁵ Bart Simon, ‘Public Science: Media Configuration and Closure in the Cold Fusion Controversy’, *Public Understanding of Science*, 10 (2001) 383– 402, p. 383.

Chapter Two – The Methods of Engagement

Throughout Chapter One the ways in which XR have risen into the public sphere were discussed and the important role that communication plays in their ability to achieve the demands they have set out. One of the most effective ways in which XR have been gaining publicity is through their protests and acts of civil disobedience. Gaining public attention, however, is only half the battle when it comes to effectively communicating facts and ideas. The majority of communication of climate science on the part XR therefore comes in through their activities that perhaps gain less media attention. These include many online activities and public talks that are given throughout the world. These talks are particularly interesting as they can be given by many different members both scientifically qualified or not. Workshops are held instructing members how to give these talks in the most effective way.⁷⁶ One such talk is a generic one, given by many speakers throughout the movement, entitled, 'Heading to Extinction (and what to do about it)'.⁷⁷ The title alone gives a strong implication of the message it is designed to give. As discussed in Chapter One, there have been many studies conducted that show the harmful, demotivating effects of fear mongering as many view their small impact to be worthless, and so will not try to make a difference. In this talk, however, things are done differently. Whilst the message may be alarming it is clear from the start, there is something that can be done, and we all have a part to play in that something.

The importance of the main XR talk in their communication of climate science is clear when looked at in more detail. To begin analysing the talk I shall start with the main aims of XR speakers. This is set out in the speaker notes compiled by XR members which are improved and added to over time. In these notes it is stated that the main aims of the talk is to 'encourage the maximum number of attendees to take the next step', and to 'educate the public...about our difficult reality so they can spread the word and add their voices to the global demands for action'.⁷⁸ An important part of the talk events is also handing out sign-up sheets so people can be contacted by email or phone about any future XR events.⁷⁹ The first of these aims demonstrates an interest in expanding the growth of XR's impact, but also demonstrates the need for communicating the proper information throughout the talk so that members may act accordingly. The second aim, however, is a little more interesting when considering XR's communication techniques. While it is clear that these talks are designed to educate the public on the climate science, the addition of adding 'their voices to the global demands for action' appears to take it a step further. Not only are XR communicating to those in the room but they aim to extend this communication through the attendees to members of the public who may

⁷⁶ Extinction Rebellion, 'Speaker Guide', *Heading for Extinction (and what to do about it)*, (Unpublished notes).

⁷⁷ Extinction Rebellion, *Heading for Extinction (and what to do about it)*, (Unpublished slides).

⁷⁸ Extinction Rebellion, 'Some notes...', *Heading for Extinction (and what to do about it)*, (Unpublished notes).

⁷⁹ Extinction Rebellion, 'Recommended things to bring to the talk...', *Heading for Extinction (and what to do about it)*, (Unpublished notes).

not otherwise be present. Through doing this, if they are successful conducting a form of mass communication, the number of people they are addressing is potentially huge. In addition, as each person spreads the message they may do it in their own personal way thus tailoring it to different audiences accordingly, and yet the message will essentially remain the same as the information will all come from the same talk.

This idea of generating a larger proportion of people to continue the communication of the climate science on to others brings to mind the dialogue model discussed earlier.⁸⁰ Audience members of XR talks often come from all different walks of life and may be educated to different levels, and socialise in different crowds. This increases the impact of the information that is being shared, as rather than being isolated to one fringe group of people, as is too often the case with activist groups, the influence will be far reaching. There is also a case to be made for the increasing popularity shown towards XR.⁸¹ As their message is shared by more and more people their popularity will only further increase as the potential audience will grow exponentially. As these audience members discuss issues raised by XR, during the talks, in their everyday lives to others they may know, it furthers the impact. Adrian Johns discusses the importance of face-to-face interactions in the creation and social acceptance of knowledge.⁸² The increased popularity of XR through word of mouth, in turn, puts pressure on the governments and industries to act. Both these institutions rely on the popularity and compliance of the people and so when they stand up and say they want things to change, provided there are enough of them speaking out, change should follow. This has been shown multiple times throughout history such as with Rosa Parks, a civil rights activist whose 'defiance sparked the Montgomery Bus Boycott; its success launched nationwide efforts to end racial segregation of public facilities'.⁸³ The more support a certain behaviour or way of thinking has, the more it becomes accepted in society. With this in mind XR's large group of supporters will continue to draw attention and more support from others.

The content of the XR talks is also well tailored to effective communication of the facts. The talk itself is split into two parts, the first titled 'Tell the truth' and the second 'Act as if the truth is real'.⁸⁴ The format of the talk itself reflects the first two demands of XR, to tell the truth and to act now.⁸⁵ This in turn may reflect a successful way of communicating XR's points as by structuring the talk in this way they are setting out a precedence of what they want to see happen in society. It is hoped that the audience

⁸⁰ Faller <<https://www.colorado.edu/earthlab/2019/05/13/dialogue-vs-deficit-strategies-science-communication-0>> [accessed 26/08/2019].

⁸¹ Taylor and Blackall <<https://www.theguardian.com/environment/2019/apr/24/support-for-extinction-rebellion-soars-in-wake-of-easter-protests>> [accessed 26/08/2019].

⁸² Adrian Johns, *The Nature of the Book: Print and Knowledge in the Making* (London: University of Chicago Press, 1998), p. 45.

⁸³ 'Rosa Parks Biography', *Biography*, (20th August 2019) <<https://www.biography.com/activist/rosa-parks>> [accessed 26/08/2019].

⁸⁴ Extinction Rebellion, *Heading for Extinction*.

⁸⁵ 'Our Demands' <<https://rebellion.earth/the-truth/demands/>> [accessed 26/08/2019].

members of the XR talks will go on to become members, or may already be so, and so will go on working to achieve their aims. By having such a clear structure that reflects their own demands it helps those who do go on to become members to visualise what they are working towards. In the first half of the talk the basic science of climate change is explained. This is put into context using the most recent IPCC report of 2018.⁸⁶ One of the major points made during this part is the 1.5°C increase in global temperature as set out by the report, paired with a graph showing that global temperature has already risen above 1.1°C.⁸⁷ This statistic is both shocking and alarming, and presumably this is exactly the reason why it is used. XR do not shy away from the truth because some people may find it uncomfortable. These statistics are meant to induce a sense of panic and urgency. As Thunberg is famously quoted as saying, 'I don't want your hope. I don't want you to be hopeful. I want you to panic. I want you to feel the fear I feel every day. And then I want you to act. I want you to act as you would in a crisis. I want you to act as if our house is on fire. Because it is.'⁸⁸

With the basics covered and the truth of the current situation hanging in the air the presentation moves on to the consequences of these truths.⁸⁹ This section of the talk covers matters such as rising sea levels, ice loss, wildfires, crop failure, famine etc. Coupled with these consequences are several pictures from recent events, many recognisable from recent news stories, such as the starving polar bear.⁹⁰ Using images such as these is important for a number of reasons such as the emotions they evoke but also, as Derek Bouse states 'how we see the natural world influences how we treat it'.⁹¹ This also demonstrates the importance behind XR's first demand, to tell the truth.⁹² Rather than rose tint their presentations of the climate crisis they give the hard truth in the hope that it will generate the desire to create change in those who hear their messages. The images used also demonstrate that these consequences are not events we are working to avoid in the future, but rather they are happening right now. With a scheduled time for reflection and the opportunity to talk with other members in the audience, the second half of the talk moves on to the ways in which audience members

⁸⁶ IPCC, *Global warming of 1.5°C: An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty: Summary for Policymakers*, e.d. by Valérie Masson-Delmotte, Panmao Zhai, Hans-Otto Pörtner, Debra Roberts, Jim Skea, Priyadarshi R. Shukla, Anna Pirani, Wilfran Moufouma-Okia, Clotilde Péan, Roz Pidcock, Sarah Connors, J. B. Robin Matthews, Yang Chen, Xiao Zhou, Melissa I. Gomis, Elisabeth Lonnoy, Tom Maycock, Melinda Tignor, Tim Waterfield, (October 2018) <https://report.ipcc.ch/sr15/pdf/sr15_spm_final.pdf> [accessed 26/08/2019].

⁸⁷ Extinction Rebellion, *Heading for Extinction*.

⁸⁸ Greta Thunberg, 'Our house is on fire': Greta Thunberg, 16, urges leaders to act on climate', *The Guardian*, (25th January 2019) <<https://www.theguardian.com/environment/2019/jan/25/our-house-is-on-fire-greta-thunberg16-urges-leaders-to-act-on-climate>> [accessed 26/08/2019].

⁸⁹ Extinction Rebellion, *Heading for Extinction*.

⁹⁰ Cristina G. Mittermeier, 'Starving-Polar-Bear Photographer Recalls What Went Wrong', *National Geographic*, (August 2018) <<https://www.nationalgeographic.com/magazine/2018/08/explore-through-the-lens-starving-polar-bear-photo/>> [accessed 26/08/2019].

⁹¹ Derek Bouse, *Wildlife Films* (University of Pennsylvania Press, 2000), p. 192.

⁹² 'Our Demands' <<https://rebellion.earth/the-truth/demands/>> [accessed 26/08/2019].

can act to help move towards preventing further damage to our climate and ecosystems.⁹³ This provides the speaker with the perfect opportunity to discuss some of the work that XR has been doing. This focuses on the concept of civil disobedience with a view to gaining widespread support. Examples are given demonstrating the success of this method in achieving change with a view to giving hope to audience members that change can be achieved.⁹⁴ The main aims of XR are also discussed along with some of their success stories and information as to different groups that have been organised throughout the globe.⁹⁵ The opportunity is then given to sign up and be a part of XR and partake in any future events.⁹⁶ Finally, the talk ends with a list of references to the information and facts used throughout.⁹⁷ This demonstrates the credibility of the information shared, and allows for further research if wanted. The talks are effective in their communication of the climate facts as they suck the audience in with alarming facts. These are then backed up by proven consequences that will be recognisable to many members in the audience. Giving information on the work that XR has done then helps to instil a sense of hope, which has already been proven to be important if people are to respond to climate information.⁹⁸ Finally, the references give a sense of authenticity to the facts presented and the sign-up sheets presents those in the audience with a personal choice to act or ignore what they have just heard. If they chose to act and sign up XR will have the details to be able to constantly contact these people and send them reminders ensuring the information they have heard during this one event does not get forgotten.

When taking into consideration the communication tactics of XR it is important that we also consider their online techniques. Harnessing the internet can be a powerful communication tool for groups such as XR. Not only is it extremely cost effective but it also allows groups to reach an incredible number of people with the messages and content they chose to put out online.⁹⁹ As a result 'the internet has become a major organising and mobilising tool for environmentalists around the world, raising people's consciousness about alternative ways of living and building the political force to make it happen'.¹⁰⁰ In addition to this, with the advancements made in technology and 'the advent of smartphones and other mobile devices', groups such as XR are able to share

⁹³ Extinction Rebellion, *Heading for Extinction*.

⁹⁴ *Ibid.*

⁹⁵ *Ibid.*

⁹⁶ *Ibid.*

⁹⁷ *Ibid.*

⁹⁸ Dimitrinka Atanasova and Kjersti Fløttum, 'Climate Change or Climate Crisis? To really engage people the media should talk about solutions', *The Conversation*, (30th May 2019) <<https://theconversation.com/climate-change-or-climate-crisis-to-really-engage-people-the-media-should-talk-about-solutions-118004>> [accessed 26/08/2019].

⁹⁹ Anastasia Kavad, 'Internet Cultures and Protest Movements: The Cultural Links Between Strategy, Organizing and Online Communication', in *Mediation and Protest Movements* ed. by Bart Cammaerts, Alice Mattoni, Patrick McCurdy (Bristol: Intellect, 2013), pp. 75-94 (p. 77).

¹⁰⁰ Manuel Castells, *The Internet Galaxy: Reflections on the Internet, Business and Society* (Oxford: Oxford University Press, 2001), p. 280.

information in higher quantities but also at a faster pace.¹⁰¹ Information can be released every minute, every hour, every day, it is completely up to the groups discretion. This in turn limits the reliance of XR on more mainstream media for putting their messages out to the public and making themselves known.¹⁰² Not only does this limit the chance of negative press, but it also reduces the possibility of miscommunication as the group is in complete control of what they release to the public. While negative press is still a very real threat, and one that may arise from content put online, the online presence of XR also allows them to respond to any negative attention they receive and respond to it on their own terms. This can be seen in a recent example when XR were accused of cultural appropriation for sharing an image of a white girl with dreadlocks.¹⁰³ XR were able to apologise for any offence caused but also were able to state their own standing on racism and sexualisation. At a time when google searches for 'climate change' are at an all-time high since the end of 2009, XR are successfully utilising one of the most effective tools for mass communication.¹⁰⁴

Perhaps the most obvious place to start is with their website. The opening page of the website consists of an introductory video above a sign-up form to join XR.¹⁰⁵ This form allows XR to get in touch with you via email or phone to provide news updates and information about any upcoming events. Below this there are then listed some upcoming events with opportunities to find out more. The website itself consists of five main sub links entitled 'The Truth', 'Act Now', 'Join Us', 'News', and 'Press'.¹⁰⁶ There are also links to their external social media pages and a 'donate' button.¹⁰⁷ This is incredibly helpful in terms of their communication of their work, demands, and the hard facts as it puts all the information into one place with a user friendly interface. Under the subpage 'The Truth' is again a video, this time a recording of the first section of the main XR talk discussed in the previous chapter.¹⁰⁸ This page also has four subheadings of its own the first being 'The Emergency'.¹⁰⁹ 'The Emergency' consist of some basic climate science about the crisis we are currently facing including some of the main statistics given in the talk for example the fact that humans have raised upon it temperature by 1.1°C already.¹¹⁰ These facts are coupled with some of the main consequences that we will

¹⁰¹ 'Communicating Science' <<https://www.ncbi.nlm.nih.gov/books/NBK425709/>> [accessed 26/08/2019].

¹⁰² Kavad, 'Internet Cultures', p. 77.

¹⁰³ Zoe Zaczek, 'Extinction Rebellion is forced to apologise for 'cultural appropriation and racism' by other climate change activists for using naked white woman with dreadlocks to promote themselves' *Mail Online*, (19th August 2019) <<https://www.dailymail.co.uk/news/article-7370559/Extinction-Rebellion-activist-group-apologise-theyre-accused-cultural-appropriation.html>> [accessed 26/08/2019].

¹⁰⁴ 'Google Trends', *Google*, (n.d.) <<https://trends.google.com/trends/explore?date=all&geo=GB&q=climate%20change>> [accessed 24/08/2019].

¹⁰⁵ *Extinction Rebellion*, (2019) <<https://rebellion.earth/>> [accessed 26/08/2019].

¹⁰⁶ *Ibid.*

¹⁰⁷ *Ibid.*

¹⁰⁸ 'The Truth', *Extinction Rebellion*, (2019) <<https://rebellion.earth/the-truth/>> [accessed 26/08/2019].

¹⁰⁹ *Ibid.*

¹¹⁰ 'The Emergency' <<https://rebellion.earth/the-truth/the-emergency/>> [accessed 26/08/2019].

face should the climate continue to be damaged at the current rate. The second subheading is entitled 'Our Demands' and here the three main aims of XR are discussed with special attention given to providing information as to what a citizens assembly is.¹¹¹ The third subheading is entitled 'About Us' and details information as to where XR arose from, their strategy, structure, principles, and values.¹¹² The fourth and final subheading is 'FAQs' which gives a myriad of information covering various different topics or related to XR.¹¹³ 'The Truth' therefore acts as an introduction to the group XR, some of the climate science behind why they are doing they are doing, and some basic information on the group itself (ie. their beginnings, aims, and achievements).¹¹⁴

The second title heading of the XR website is entitled 'Act Now'.¹¹⁵ This page, like the previous two, also consists of a video.¹¹⁶ This time it is the second half of the main XR talk in which detailing information as to how we can act to generate change. Once again, this page consists of four different subheadings. The first of these is entitled 'Join Us'.¹¹⁷ This page consists of a number of ways in which members of the public can get involved with XR and also includes links to their talk and some basic information about the group and the current climate crisis.¹¹⁸ This tab is linked to the overall 'Join Us' subheading on the main website heading bar.¹¹⁹ The next heading is titled 'Events' and covers the next upcoming events arranged by the group that readers may wish to get involved with.¹²⁰ These can be sorted by date or keyword making for a very user friendly interface. The third subheading is titled 'Local Groups' and consists of a world map on which are pinned all the areas where XR has groups available to join.¹²¹ While this particular case study is only focused on the XR UK groups it is important to note that they have a global reach. Secord notes that fact that science requires us to pass on local knowledge or else it remains as such, and issues such as climate change require global action.¹²² The internet provides the perfect forum on which to connect people throughout the world in a cost effective and instantaneous way. Once again this is very user friendly and when a particular group pin is clicked on details are provided on the group's name, an email (if available) and a social media page.¹²³ Finally, there is a subpage on 'Resources'.¹²⁴ This

¹¹¹ 'Our Demands' <<https://rebellion.earth/the-truth/demands/>> [accessed 26/08/2019].

¹¹² 'About Us' <<https://rebellion.earth/the-truth/about-us/>> [accessed 26/08/2019].

¹¹³ 'FAQS' <<https://rebellion.earth/the-truth/faqs/>> [accessed 26/08/2019].

¹¹⁴ 'The Truth' <<https://rebellion.earth/the-truth/>> [accessed 26/08/2019].

¹¹⁵ *Extinction Rebellion* <<https://rebellion.earth/>> [accessed 26/08/2019].

¹¹⁶ 'Act Now' <<https://rebellion.earth/act-now/>> [accessed 26/08/2019].

¹¹⁷ *Ibid.*

¹¹⁸ 'Join Us', *Extinction Rebellion*, (2019) <<https://rebellion.earth/act-now/join-us/>> [accessed 26/08/2019].

¹¹⁹ *Extinction Rebellion* <<https://rebellion.earth/>> [accessed 26/08/2019].

¹²⁰ 'Events', *Extinction Rebellion*, (2019) <<https://rebellion.earth/act-now/events/>> [accessed 26/08/2019].

¹²¹ 'Local Groups', *Extinction Rebellion*, (2019) <<https://rebellion.earth/act-now/local-groups/>> [accessed 26/08/2019].

¹²² Secord, *Knowledge in Transit*, pp. 660-661.

¹²³ <https://rebellion.earth/act-now/local-groups/>

¹²⁴ 'Resources', *Extinction Rebellion*, (2019) <<https://rebellion.earth/act-now/resources/>> [accessed 26/08/2019].

is a particularly useful page for those who have decided they do want to become a part of XR. Here there is information on several of the different 'Working Groups' within the organisation such as the 'Action Group', the 'Art Group', and 'Communities'.¹²⁵ There are also resources detailing the legal information as to members rights to protest and the 'possible consequences of arrest', information on wellbeing, and some more details as to the citizens' assembly.¹²⁶ All of this information presents XR as an incredibly transparent group. There is little information, if any, left out and answers can be found to most questions users of their site may have.

This brings us on to the final three sections of the website: 'Join Us', 'News', and 'Press'.¹²⁷ The 'Join Us' section, as already discussed, can be reached through the 'Act Now' information, the main implication being that to act it is first required that you become a part of the group.¹²⁸ This section of the website does not carry as much information as the others, and contains no separate subheadings of its own. Instead this page is incredibly clear consisting of four steps for the reader to complete. The first is to watch the 'Heading for extinction' talk, thus educating the reader of the dire state of the climate and hopefully generating a desire to become involved in bringing about change.¹²⁹ The second step is to learn more about XR themselves and the work they do.¹³⁰ The third step is to join a local XR group, and the fourth is to join a UK working group.¹³¹ Each step contains links to provide information or help as to how to carry out each point. The 'News' section of the website is fairly self-explanatory and consists of all the latest XR news.¹³² Similarly, the 'Press' section contains all the latest press releases from XR.¹³³ When stories are clicked on in the 'Press' section they take you directly back to the 'News' section and to the article which they have published. These last two sections are essentially the same and it is unclear as to why they are set out into two separate headings. Nonetheless, they are tailored towards educating the user of the site on all the latest XR news and events, including their achievements. The interface of the XR website as a whole appears to be very user friendly. This means the users can effectively navigate and find the information they want, utilising the site to its fullest potential. Information is clearly split into different focuses that will appeal to audiences, a consideration that is important when conducting mass communication on the scale attempted by XR. All in all, the impression is that XR are busy working towards a brighter future, and who wouldn't want to be a part of that? Indeed, at the bottom of

¹²⁵ *Ibid.*

¹²⁶ 'Legal Info', *Extinction Rebellion*, (2019) <<https://rebellion.earth/act-now/resources/legal-info/>> [accessed 26/08/2019].

¹²⁷ *Extinction Rebellion* <<https://rebellion.earth/>> [accessed 26/08/2019].

¹²⁸ 'Join Us' <<https://rebellion.earth/act-now/join-us/>> [accessed 26/08/2019].

¹²⁹ *Ibid.*

¹³⁰ *Ibid.*

¹³¹ *Ibid.*

¹³² 'News', *Extinction Rebellion*, (2019) <<https://rebellion.earth/act-now/events/news/>> [accessed 26/08/2019].

¹³³ 'Press' <<https://rebellion.earth/press/>> [accessed 26/08/2019].

every page there is a 'Join the Rebellion' section where users can quickly and easily enter their details and become a part of XR, it really is that simple.

The XR website follows a similar structure to that of the main XR talk. The majority of the information is focused into the two subheadings 'The Truth' and 'Act Now' which also reflect the first two demands made by the group.¹³⁴ This is an important part of XR's communication as it sets out clearly for users of the site just what is expected of them. It has been stated that 'the cultures underlying a movements internet use are linked to their other communication practices' and this is demonstrated in the XR website.¹³⁵ It is clear from their methods of communication that the main aims of XR are educate the public about the truth behind the climate crisis and to encourage them to act on these facts. The actions encouraged by XR are important as, already noted in Chapter One, the protests and acts of civil disobedience generate a lot of media and public attention. This attention then draws the public into the other methods XR use to communicate their work, such as their website, thus encouraging more people to take action and so the cycle continues.

In addition to their website, XR also has a large online presence elsewhere, particularly on social media sites. The three main ones, listed on the website itself, are Facebook, Twitter, and Instagram.¹³⁶ Instagram has the largest number of followers out of these three with a total of 332k.¹³⁷ This may come as a surprise as Facebook has considerably more users than Instagram and has been around for a larger number of years.¹³⁸ Despite this, the larger number of Instagram followers can be explained by the platforms demographic compared with that of the members of XR. Both Instagram and XR have a larger following of younger adults (aged around 18-29).¹³⁹ Despite this, however, XR's Instagram page has considerably less content than its Twitter and Facebook pages, this

¹³⁴ 'Our Demands' <<https://rebellion.earth/the-truth/demands/>> [accessed 26/08/2019].

¹³⁵ Kavad, 'Internet Cultures', p. 77.

¹³⁶ Extinction Rebellion <<https://rebellion.earth/>> [accessed 26/08/2019].

¹³⁷ Extinction Rebellion, *Instagram* <<https://www.instagram.com/extinctionrebellion/>> [accessed 16/07/2019].

¹³⁸ Shane Barker, 'Instagram Ads vs. Facebook Ads: Which are Better for eCommerce?', *Sprout Social*, (13th July 2018) <<https://sproutsocial.com/insights/instagram-ads-vs-facebook-ads/>> [accessed 24/08/2019].

¹³⁹ Mark Sweney, 'Is Facebook for Old People? Over-55s flock in as the young leave', *The Guardian*, (12th February 2018) <https://amp-theguardian-com.cdn.ampproject.org/v/s/amp.theguardian.com/technology/2018/feb/12/is-facebook-for-old-people-over-55s-flock-in-as-the-young-leave?usqp=mq331AQA&fbclid=IwAR27WzHsK9uqeNRylimR5Ndiw5Pw8D66ajv8I03dF1KHwYrQdxwmItoLiFw&js_v=0.1#referrer=https%3A%2F%2Fwww.google.com&tf=From%20%251%24s&share=https%3A%2F%2Fwww.theguardian.com%2Ftechnology%2F2018%2Ffeb%2F12%2Fis-facebook-for-old-people-over-55s-flock-in-as-the-young-leave> [accessed 24/08/2019].

'Extinction Rebellion: Who are they and what are their aims?', *BBC*, (16th July 2019) <https://www-bbc-co-uk.cdn.ampproject.org/v/s/www.bbc.co.uk/news/amp/uk-48607989?usqp=mq331AQA&fbclid=IwAR2m9wL7JcEgNqXVVFf2R_QmcWMwFvHzJadK9T73NUV_CB1Ruccauh4OjEo&js_v=0.1#referrer=https%3A%2F%2Fwww.google.com&tf=From%20%251%24s> [accessed 24/08/2019].

also means their content here is a lot less frequent and has considerably less variety.¹⁴⁰ XR may be missing an opportunity here to use this platform to its fullest potential in communicating their message. At the very least, they could advertise their other social media sights and website more here to draw audiences to platforms that contain more detailed information that is shared more frequently. The content shared on Instagram is mainly snappy images with a couple of sentences explanation, if that.¹⁴¹ On Facebook and Twitter, however, the content varies considerably.¹⁴² Here it is much more descriptive and, more often than not, contains links to third party sites, usually news forums or their own website. Facebook is particularly interesting in terms of content as here there are also XR events listed that followers can get updates for.¹⁴³ In addition, both XR's Facebook and Twitter pages share posts made by all three of their major social media platforms generating further awareness.¹⁴⁴ The events section of Facebook is of particular importance when considering the successes of XR's communication.¹⁴⁵ The creation of event invites online helps to spread awareness about protests, talks, support groups etc. These are all an integral part of what XR do and Facebook allows for the perfect way of planning and organising large groups of people.

The use of Facebook events is an important part of XR's communication for a number of reasons. The first of these is the obvious fact that it makes spreading awareness about an upcoming event a lot easier. Once an event is created on Facebook it can be shared across all social media sites and even sent in private messages. These events also appear on google searches.¹⁴⁶ Another important aspect of this is the amount of information that can be shared through these event pages. Information can be given on where the event is taking place, when it is happening, what it is about etc.¹⁴⁷ There is the opportunity for a huge amount of information to be shared in the space that Facebook provides in this forum. Furthermore, when participants click that they are attending, or are interested in a particular event other visitors to the site can see this. Therefore, if a large number of people have clicked attending the event may look more intriguing or alluring to others. There is also the matter to consider that when a Facebook user clicks that they are attending a particular event this will appear on that particular persons 'friends' newsfeed, thus spreading awareness about the event even further. Finally,

¹⁴⁰ Extinction Rebellion <<https://www.instagram.com/extinctionrebellion/>> [accessed 16/07/2019]. Extinction Rebellion, *Facebook* <<https://www.facebook.com/ExtinctionRebellion/>> [accessed 16/07/2019].

Extinction Rebellion, *Twitter* <<https://twitter.com/ExtinctionR>> [accessed 16/07/2019].

¹⁴¹ Extinction Rebellion <<https://www.instagram.com/extinctionrebellion/>> [accessed 16/07/2019].

¹⁴² Extinction Rebellion <<https://www.facebook.com/ExtinctionRebellion/>> [accessed 16/07/2019]. Extinction Rebellion <<https://twitter.com/ExtinctionR>> [accessed 16/07/2019].

¹⁴³ Extinction Rebellion <<https://www.facebook.com/ExtinctionRebellion/>> [accessed 16/07/2019].

¹⁴⁴ Extinction Rebellion <<https://www.facebook.com/ExtinctionRebellion/>> [accessed 16/07/2019]. Extinction Rebellion <<https://twitter.com/ExtinctionR>> [accessed 16/07/2019].

¹⁴⁵ Extinction Rebellion, 'Upcoming Events', *Facebook* <https://www.facebook.com/pg/ExtinctionRebellion/events/?ref=page_internal> [accessed 23/08/2019].

¹⁴⁶ *Ibid.*

¹⁴⁷ *Ibid.*

event pages on Facebook allow for discussions amongst those who have shown interest in attending a particular event.¹⁴⁸ This makes it simple for XR members, or those who wish to come along to one of their events, to ask each other questions and give advice or information. It also generates a strong sense of society and group mentality which can be a very powerful persuader. In fact, studies have shown that people often respond well to online group involvement and this is often followed through to their 'civic activities'.¹⁴⁹ All this helps XR to communicate to a large portion of society about upcoming events, which in turn are used to educate members of the public about climate science and the current climate crisis, whilst also encouraging them to act on this new information in their daily lives.

Another form of online media widely used by XR is that of videos via their YouTube channel.¹⁵⁰ A few of these videos feature heavily on their website. The YouTube channel itself is fairly popular with 29,701 subscribers and with a huge view count of 1,956,708. Their channel currently consists of 295 videos that have been uploaded since its creation in February 2017.¹⁵¹ The channel itself is organised into several different playlists a few of which will be paid particular focus to.¹⁵² These are the 'Actions & Achievements', the 'Highlights', the 'Extinction Rebellion Talks', the 'Getting Started with XR', and the 'How to...' playlists.¹⁵³ Although all the titles of the playlists are fairly self-explanatory the 'Actions & Achievements' section currently contains 61 videos, most of them below five minutes, of different protests, uprisings, and more official events such as Oxford Council's announcement that they would be declaring a climate emergency.¹⁵⁴ Strangely the main XR talk, discussed earlier in this thesis, cannot be found in the 'Extinction Rebellion Talks' playlist.¹⁵⁵ This, instead only contains a mere four videos, three of which are talks given by Dr Bradbrook and the third by Dr Rupert Read.¹⁵⁶ This is potentially misleading to users who could get lost trying to find the information they want if they do not come directly from the links provided on the main XR website.¹⁵⁷ This in turn may lead people to become discouraged and seek information elsewhere, if

¹⁴⁸ Extinction Rebellion, 'XR Tree Planting Day - Plant a Forest at the Heart of Wellington', *Facebook* <https://www.facebook.com/events/479004609343321/?active_tab=discussion> [accessed 23/07/2019].

¹⁴⁹ Louise F. Pendrya and Jessica Salvatore, 'Individual and social benefits of online discussion forums', *Computers in Human Behavior*, 50 (September 2015), 211-220 (p. 211).

¹⁵⁰ Extinction Rebellion, *YouTube* <<https://www.youtube.com/channel/UCYThdLKE6TDwBJh-qDC6ICA>> [accessed 23/08/2019].

¹⁵¹ *Ibid.*

¹⁵² Extinction Rebellion, 'Playlists', *YouTube* <<https://www.youtube.com/channel/UCYThdLKE6TDwBJh-qDC6ICA/playlists>> [accessed 16/07/2019].

¹⁵³ *Ibid.*

¹⁵⁴ Extinction Rebellion, 'Actions & Achievements', *YouTube* <https://www.youtube.com/playlist?list=PLnzA40Blbb2kraNJK16EB8hNIMPD_giUB> [accessed 16/07/2019].

¹⁵⁵ Extinction Rebellion, 'Extinction Rebellion Talks', *YouTube* <<https://www.youtube.com/playlist?list=PLnzA40Blbb2mx7BSarugmcRwDZyiHlPe8>> [accessed 16/07/2019].

¹⁵⁶ *Ibid.*

¹⁵⁷ 'Join Us' <<https://rebellion.earth/act-now/join-us/>> [accessed 26/08/2019].

at all. The main XR talk can be found in the playlist entitled 'Principles, Philosophy, Core Values, People'.¹⁵⁸ This playlist contains twenty-seven videos all explaining different aspects of XR and their core beliefs and aims. The videos in this channel tend to be much longer in length, the longest of which is one hour and forty-six minutes, a length that is potentially too long for most viewers to remain engaged.¹⁵⁹ This video is an extended version of the main XR talk given in Oxford, filmed and uploaded to the XR YouTube channel. There are a few different recordings of this talk uploaded here, and presumably as the movement continues more will be added.¹⁶⁰ Finally, the 'How to...' and the 'Getting Started with XR' playlists are tailored perfectly to newcomers of XR.¹⁶¹ They both detail important information about the group itself and about how to get involved in different ways. The videos within these playlists are for those already interested in XR and taking action against climate change, while this does provide effective communication for those already interested in the group it relies on audiences already having gained knowledge and interest in becoming a part of them.

The use of YouTube by XR makes for a very effective communication tool. As already discussed, XR has a strong online presence, both via their own website and through social media pages. Videos uploaded to their YouTube channel may then be shared through any of these different forums. Not only this but YouTube is a widely used media and videos are often sent amongst friends and shared on personal social media accounts.¹⁶² The most popular playlist, to date, is the 'Highlights' playlist currently with 10,769 views.¹⁶³ When reviewing the content of this playlist videos are kept short, rarely surpassing five minutes and most video titles contain snappy quotes from the video itself, acting much like newspaper headlines.¹⁶⁴ The length of the video is important as studies have shown that shorter videos tend to be more popular and thus

¹⁵⁸ Extinction Rebellion, 'Principles, Philosophy, Core Values, People', *YouTube* <<https://www.youtube.com/playlist?list=PLnzA40Blbb2kiECebMMSP0jg8pBGdnf2A>> [accessed 16/07/2019].

¹⁵⁹ Extinction Rebellion, 'Heading for Extinction' - Oxford Extinction Rebellion talk with George Monbiot and friends', *YouTube*, (28th March 2019) <https://www.youtube.com/watch?v=n_y1FXK_jE&list=PLnzA40Blbb2kiECebMMSP0jg8pBGdnf2A&index=14> [accessed 16/07/2019].

¹⁶⁰ 'Principles, Philosophy, Core Values, People' <<https://www.youtube.com/playlist?list=PLnzA40Blbb2kiECebMMSP0jg8pBGdnf2A>> [accessed 16/07/2019].

¹⁶¹ Extinction Rebellion, 'How to...', *YouTube* <<https://www.youtube.com/playlist?list=PLnzA40Blbb2m76b1wS8zwq2-kmoGG0wqo>> [accessed 16/07/2019].

Extinction Rebellion, 'Getting Started with XR', *YouTube* <<https://www.youtube.com/playlist?list=PLnzA40Blbb2kVM38JvpPv-4By8oC5ilzG>> [accessed 16/07/2019].

¹⁶² 'YouTube for Press', *YouTube*, (n.d.) <<https://www.youtube.com/yt/about/press/>> [accessed 26/08/2019].

¹⁶³ Extinction Rebellion, 'Highlights', *YouTube* <<https://www.youtube.com/playlist?list=PLnzA40Blbb2mKmbNfQBCFBlgzYJ2czgWU>> [accessed 16/07/2019].

¹⁶⁴ *Ibid.*

gain more views.¹⁶⁵ This is important in terms of communicating information about climate science as viewers will be more willing to spare several one minute increments as opposed to sitting through a whole hour long video. Despite this, the average YouTube viewing time is around 40 minutes suggesting that although viewers prefer the shorter content, they will often watch more than just one video.¹⁶⁶ This is further aided by the organisation of XR's channel into playlists and YouTube has a function whereby which the next video in a playlist will automatically play once the previous one is finished.¹⁶⁷ This makes it more likely that the viewer will continue watching XR content as opposed to clicking onto a different video suggested by YouTube. This may in turn help to increase the communication power as audiences can watch lots of short videos on different topics, as opposed to one long one which may lose their attention.

The YouTube suggestions are another important aspect to consider in terms of XR's involvement in science communication. While it is undoubtedly true that when a user watches an XR video, other videos created by this channel will appear in the video suggestion bar, there is also the high possibility that other climate related videos will appear. This is due to the nature of YouTube's algorithms whereby related videos are suggested to users who watch videos of a particular topic.¹⁶⁸ Although the quality of these videos cannot be monitored or decided by XR themselves it is potentially through their content that viewers will be accessing further information about climate change, thus increasing the communication of climate science to the general public. Although the suggested videos may be content from other contributors, further education and increased information on the topic can never be a bad thing. Indeed, XR works hard to make themselves known and one of their key aims is to 'Tell the Truth'.¹⁶⁹ By this it is implied that the public should be made known of the current situation, whatever the method. Education through media such as video content has been shown to be very effective. Jessica Riskin discusses, in her article *Amusing Physics*, how students have been found to want to see science as opposed to learn about it.¹⁷⁰ She develops this idea stating that 'all ideas arise from sensations'.¹⁷¹ This can be applied to the work of XR and others creating content to raise awareness of climate change as videos on this topic act as a form of passive learning where audiences will happily sit through 40 minutes of educational content, a time frame which they would not have dedicated to sit down and read a scientific paper on.

¹⁶⁵ 'The Best Video Length for Different Videos on YouTube', *Minimatters*, (n.d.)

<<https://www.minimatters.com/youtube-best-video-length/>> [accessed 26/08/2019].

¹⁶⁶ Kit Smith, '52 Fascinating and Incredible YouTube Statistics', *Brandwatch*, (15th July 2019)

<<https://www.brandwatch.com/blog/youtube-stats/>> [accessed 16/07/2019].

¹⁶⁷ 'Playlists' <<https://www.youtube.com/channel/UCYThdLKE6TDwBJh-qDC6ICA/playlists>> [accessed 16/07/2019].

¹⁶⁸ 'YouTube Recommendations', *YouTube Help*, (2nd May 2019)

<<https://support.google.com/youtube/thread/1456096?hl=en>> [accessed 24/08/2019].

¹⁶⁹ 'Our Demands' <<https://rebellion.earth/the-truth/demands/>> [accessed 26/08/2019].

¹⁷⁰ Jessica Riskin, 'Amusing Physics', in *Science and Spectacle in the European Enlightenment* ed. by B. Bensaude-Vincent and C. Blondel, (Aldershot: Ashgate, 2008), pp. 43-64 (p. 59).

¹⁷¹ *Ibid.* p. 62.

Similar to the way in which the YouTube video suggestions may encourage science communication somewhat beyond the control of XR, their videos may do this in another sense. As already discussed, users of YouTube are free to share videos both privately and publicly not only helping the spread of XR's message but also encouraging a conversation about climate science amongst friends and acquaintances. This is also true of XR's YouTube videos, yet in a much broader sense. All videos on the XR YouTube channel have the comments section enabled meaning that viewers of the video can hold discussions with each other online. Questions can be asked, and answered, ideas shared, and even further sources suggested. While there may also be some negative comments there is more likely to be a higher ratio of positive or helpful ones as it is people interested in the topic of climate change who are more likely to be watching the videos in the first place. All this adds to the sense of community and mass approval of an idea. As Latour highlights, the creation of scientific fact is often reliant on mass acceptance and approval.¹⁷² He states that 'science and society cannot be separated' reflecting the need for the mass communication and acceptance of scientific fact if it is to be recognised as relevant and important.¹⁷³ Massimiano Bucchi touches on this when he states how 'scientific information may be ignored by the public as irrelevant to their everyday concerns.'¹⁷⁴ As a result of this, the communication of science is often the process by which a fact is produced and yet it is often masked as popularisation.¹⁷⁵ Thus through the creation of a large supporting community XR are gathering enough support to generate a climate rebellion. This is only possible through their successful communication of the facts ensuring public acceptance of the crisis we face as important and relevant to their lives, only then can society commit to making the needed changes in their lives.

The idea behind a gradual change in people's perspectives and actions leading to a 'revolution' can be further explored through the works of Steven Shapin.¹⁷⁶ In Shapin's book *Scientific Revolution* he starts with the famous words 'there was no scientific revolution and this is a book about it'.¹⁷⁷ Shapin then goes on to detail the way in which through the correct communication of ideas and facts people's mindsets gradually adjust to accept new ideas.¹⁷⁸ There is no sudden shift in the way that people think, or some grand disproving event, as Karl Popper would suggest.¹⁷⁹ Instead the change

¹⁷² Bruno Latour, 'From the world of science to the world of research?', *Science*, 280 (1998), 208-209 (p. 208).

¹⁷³ *Ibid.*

¹⁷⁴ Massimiano Bucchi, *Science in Society: An Introduction to Social Studies of Science* (London: Routledge, 2004), p. 111.

¹⁷⁵ *Ibid.*, p. 122.

¹⁷⁶ Steven Shapin, *The Scientific Revolution* (London: Chicago University Press, 1996).

¹⁷⁷ *Ibid.*, p. 1.

¹⁷⁸ *Ibid.*, p. 3.

¹⁷⁹ 'Karl Popper: British Philosopher', *Encyclopaedia Britannica*, (24th July 2019) <<https://www.britannica.com/biography/Karl-Popper>> [accessed: 26/08/2019].

comes slowly and almost unnoticed as both old and new theories exist together. While the current climate crisis is certainly not going unnoticed the changes in people's attitudes can be described as gradually changing. To date in the UK it is no longer debated whether climate change is fact or fiction with under 5% of those in Britain being classed as climate change deniers.¹⁸⁰ The issue here is to convince people that they can change the current crisis we are facing, and to educate them as to how this is possible. This is where the work of XR plays such an important role. Whilst people are aware of the climate crisis, many do not recognise the extent to which their everyday lives play a role in this. Too often the blame is placed on large corporations making it easy for the public to ignore their own impact or pass it off as so tiny by comparison that it becomes irrelevant.¹⁸¹ As more people are seen to support a certain viewpoint or fact, the more likely it is that others will follow suit. When considering the required 3.5% of support XR are aiming for this in terms of the way in which they are communicating their ideas and facts about climate science we can see that they are generating communities of people who all agree on matters relating to the earth's climate and their own role in this.¹⁸² This in turn will then generate more support as more people become aware of the community. This is helped by tactics such as XR's use of social media and the YouTube comment section. Another important way in which this sense of community can be seen is through XR's mailing system. It is incredibly easy to get in touch with group leaders via email and ask them any questions.¹⁸³ In addition frequent emails are sent out to those on the XR mailing list, about XR events and news. This provides frequent reminders of the situation to those who may otherwise be inclined to continue living their lives as normal and push any of the new information to the back of their minds.

One potential issue with the XR YouTube channel in terms of their communication method is that of who is actually doing the communicating. A study by Dustin J. Welbourne, and Will J. Grant demonstrated that science communication on YouTube is much more effective when the communicator is consistent throughout all the videos.¹⁸⁴ XR's videos are lacking this as most videos are interviews with different activists or promotional videos for their protests and events.¹⁸⁵ Whilst these are effective in their own way it does mean the channel is lacking a consistent communicator which may

¹⁸⁰ Oliver Milman and Fiona Harvey, 'US is hotbed of Climate Change denial major global survey finds', *The Guardian*, (8th May 2019) <<https://www.theguardian.com/environment/2019/may/07/us-hotbed-climate-change-denial-international-poll>> [accessed 26/08/2019].

¹⁸¹ Morten Fibieger Byskov, 'Climate Change: Focusing on how individuals can help is very convenient for corporations', *The Conversation*, (10th January 2019) <<https://theconversation.com/climate-change-focusing-on-how-individuals-can-help-is-very-convenient-for-corporations-108546>> [accessed 26/08/2019].

¹⁸² 'Act Now' <<https://rebellion.earth/act-now/>> [accessed 26/08/2019].

¹⁸³ 'Contact', *Extinction Rebellion*, (2019) <<https://rebellion.earth/contact/>> [accessed 26/08/2019].

¹⁸⁴ Dustin J. Welbourne, and Will J. Grant, 'Science communication on YouTube: Factors that affect channel and video popularity', *Public Understanding of Science*, 25.6 (2016), 706–718 p. 706.

¹⁸⁵ Extinction Rebellion <<https://www.youtube.com/channel/UCYThdLKE6TDwBIh-qDC6ICA>> [accessed 16/07/2019].

hinder how effectively they are able to communicate their ideas and information to viewers. Despite this oversight, there are other factors that promise to make the XR YouTube content more successful such as the celebrity endorsement that they often encompass. We have long known the success of using celebrity endorsement to sell a certain product or idea and this idea can easily be applied to teaching the public about climate change.¹⁸⁶ This has been seen before as with Al Gore's film *An Inconvenient Truth*.¹⁸⁷ Nieto-Galan states that this film is what brought global warming into the public focus after decades of it already being known.¹⁸⁸ XR's use of celebrity endorsement can be seen in videos such as Harrison Ford's speech, given at the Global Climate Action Summit back in 2018, overlaid with moving music and images of climate destruction and heavily branded with the XR symbol despite this speech being made before XR had come into existence.¹⁸⁹ Perhaps more iconically is the video title 'Climate Change and Why We Should Panic voiced by Keira Knightley | Extinction Rebellion'.¹⁹⁰ Knightley lent her voice to this video as she publicly came out in support of XR and the work that they do.¹⁹¹ This video, to date uploaded a month ago, has clocked up an impressive 37K views.¹⁹² When we compare this to the other 14 videos, also uploaded in a time frame of a month prior to writing this, they have only reached an average of 3.95K views (with the exception of New York's declaration of a climate emergency which reached 11K and was excluded from this mean calculation).¹⁹³ In comparison to this Harrison Ford's video has reached a huge viewing count of 187K views and was only uploaded two weeks ago.¹⁹⁴ These simple statistics demonstrate powerful draw of celebrity endorsement and highlight how this can be used to generate a large audience therefore maximising the chance for successful communication.

¹⁸⁶ Ashley Morgan, 'How celebrity non-experts and amateur opinion could change the way we acquire knowledge', *The Conversation*, (2nd January 2019) <<https://theconversation.com/how-celebrity-non-experts-and-amateur-opinion-could-change-the-way-we-acquire-knowledge-106002>> [accessed 26/08/2019].

¹⁸⁷ *An Inconvenient Truth*, dir. by Davis Guggenheim (Paramount Classics, 2006).

¹⁸⁸ Nieto-Galan, *Science in the Public Sphere*, p. 190.

¹⁸⁹ Extinction Rebellion, "'If We Don't Protect Nature We Can't Protect Ourselves" Harrison Ford | Extinction Rebellion', *YouTube*, (26th July 2019) <https://www.youtube.com/watch?v=WdSmnlVC_yk&list=PLnzA40Blbb2mKmbNfQBCFBlgzYI2czgWU&index=2&t=0s> [accessed 16/07/2019].

¹⁹⁰ Extinction Rebellion, 'Climate Change and Why We Should Panic voiced by Keira Knightley | Extinction Rebellion', *YouTube*, (2nd July 2019) <<https://www.youtube.com/watch?v=SIqJ05Dv8BM>> [accessed 16/07/2019].

¹⁹¹ *Ibid.*

¹⁹² 'Highlights' <<https://www.youtube.com/playlist?list=PLnzA40Blbb2mKmbNfQBCFBlgzYI2czgWU>> [accessed 16/07/2019].

¹⁹³ *Ibid.*

¹⁹⁴ *Ibid.*

Chapter Three – The Results of Extinction Rebellion’s Climate Change Communication

It is extremely hard to measure whether or not XR is successful with its communication. Whilst it is clear they are working hard to communicate the climate science to the general population this does not necessarily mean anyone is listening. In order to measure their success this chapter will look at each of their three main aims with a view to the extent at which each aim has been achieved. This is important as communication is detrimental to the success of each of XR’s aims. Of the three aims the first two, to tell the truth and to act now, rely heavily on the cooperation of the government.¹⁹⁵ The third aim, however, differs slightly as it breaks away from the political influence with the creation of a citizens assembly which would ultimately be free from the ties of politics.¹⁹⁶ Whilst the reliance is heavily put on governmental change for the first two aims, this does not mean to say that the general public holds no influence. Many argue that political change comes from the bottom up and in this way the actions of the public influence the actions of those in politics.¹⁹⁷ Here is where the communication on the part of XR is so important. Through educating the public on the crisis it will make people more aware of the state in which our planet is in, thus also encouraging governments to tell the truth and commit to reducing carbon emissions. Finally through XR raising awareness and with the completion of the first two aims it will become clear that the public wants to be a part of the decisions on how we as a society should change its actions, but also that they have the education and knowledge to do so, thus resulting in the creation of a citizens assembly.

The first aim as set out on the XR website is that of ‘Tell the Truth’, which is expanded to state that the government must declare a state of climate and ecological emergency.¹⁹⁸ This appears easy on the surface to assess whether or not XR has been successful in this aim as records show how many governments have declared climate emergencies. At the time of writing (August 2019) a total of 865 governments have declared climate emergencies, these span a total of eighteen countries.¹⁹⁹ While it is correct to state that many of these declarations may have happened despite XR, the statistics can be explored a little deeper. Of the 865 declarations, only fourteen were made before the XR came into existence.²⁰⁰ Perhaps more interestingly, when looking in the UK, where XR was first formed and remains strongest to date, there were no declarations of climate

¹⁹⁵ ‘Our Demands’ <<https://rebellion.earth/the-truth/demands/>> [accessed 26/08/2019].

¹⁹⁶ *Ibid.*

¹⁹⁷ Richard E. Matland, ‘Synthesizing the Implementation Literature: The Ambiguity-Conflict Model of Policy Implementation’, *Public Administration Research and Theory*, 5.2 (April 1995), 145-174 (pp.148-149).

¹⁹⁸ ‘Our Demands’ <<https://rebellion.earth/the-truth/demands/>> [accessed 26/08/2019].

¹⁹⁹ ‘Climate Emergency Declarations in 865 Jurisdictions and Local Governments Cover 212 Million Citizens’, *Climate Emergency Declaration*, (26th July 2019) <<https://climateemergencydeclaration.org/climate-emergency-declarations-cover-15-million-citizens/>> [accessed 26/07/2019].

²⁰⁰ *Ibid.*

emergency made before October 31st 2018 (XR's first appearance).²⁰¹ The UK is also the first government to declare a country wide climate emergency, although this still needs to be approved by the House of Commons.²⁰² Once again there is no conclusive evidence to suggest that these declarations of climate emergency are a direct result of the work done by XR but it stands to reason that they will have had some influence.

Most of the declarations of climate emergency made by governments have happened after the creation of XR. This is most likely a combination of different factors that has led to this trend. There have been many events happening recently that have made the public, and local governments, more aware of the dramatic changes the climate is suffering. This past year saw the first glacier to melt from climate change, the latest IPCC report for 2018 was released warning of the drastic changes that are required of us, and the Amazon has seen a devastating number of fires.²⁰³ There is an endless list of events that have been occurring that could all point towards the increase in governmental acknowledgement of the climate crisis. It also stands to reason that as more governments declare climate emergencies it puts pressure on others to follow suit creating a snowball effect which we have seen here in the UK. Nevertheless, the BBC lists the influences of XR as a motivator for both the UK whole governmental declaration, along with earlier declarations made by the Scottish and Welsh governments.²⁰⁴ The protests are stated in particular as being a driving factor for governments to declare a state of climate emergency. The first week of protests in April 2019 saw support for XR increase by around 30,000.²⁰⁵ With backers in numbers as high as these and news reports of protests bringing cities such as London to a standstill, it would be foolhardy for governments and local councils not to address the demands made. This is evidence of XR's successful communication being the making of science, as more people demand the truth be told the government caves and makes it so. This

²⁰¹ 'Climate Emergency Declarations' <<https://climateemergencydeclaration.org/climate-emergency-declarations-cover-15-million-citizens/>> [accessed 26/07/2019].

'About Us' <<https://rebellion.earth/the-truth/about-us/>> [accessed 26/08/2019].

²⁰² 'Climate Emergency Declarations' <<https://climateemergencydeclaration.org/climate-emergency-declarations-cover-15-million-citizens/>> [accessed 26/07/2019].

²⁰³ Agence France-Presse, 'Iceland holds funeral for first glacier lost to climate change', *The Guardian*, (19th August 2019) <<https://www.theguardian.com/world/2019/aug/19/iceland-holds-funeral-for-first-glacier-lost-to-climate-change>> [accessed 26/08/2019].

IPCC <https://report.ipcc.ch/sr15/pdf/sr15_spm_final.pdf> [accessed 26/08/2019].

'5 things you can do to help the Amazon Rainforest', *WWF*, (n.d.) <https://www.wwf.org.uk/updates/5-ways-help-amazon-rainforest?pc=ATE001001&gclsrc=aw.ds&&ds_rl=1262365&gclid=CjwKCAjwqZPrBRBnEiwAmNJsNqQIXILrAnZ690QwPCXULYRh3F3tQQNbQZ1t7TY4pmyvfyJAq7ePxoCeqwQAvD_BwE&gclsrc=aw.ds> [accessed 26/08/2019].

²⁰⁴ 'UK Parliament declares climate change emergency', *BBC*, (1st May 2019)

<<https://www.bbc.co.uk/news/uk-politics-48126677>> [accessed 13/08/2019].

'Nicola Sturgeon declares 'climate emergency' at SNP conference', *BBC*, (28th April 2019)

<<https://www.bbc.co.uk/news/uk-scotland-scotland-politics-48077802>> [accessed 13/08/2019].

'Climate emergency' declared by Welsh Government', *BBC*, (29th April 2019)

<<https://www.bbc.co.uk/news/uk-wales-politics-48093720>> [accessed 13/08/2019].

²⁰⁵ Taylor and Blackall <<https://www.theguardian.com/environment/2019/apr/24/support-for-extinction-rebellion-soars-in-wake-of-easter-protests>> [accessed 26/08/2019].

paves the way for changes to be made that reflect the public attitude towards the climate science that has been known for years. It is clear therefore, that whilst it cannot be stated as a direct fact that XR caused governments to 'Tell the Truth', certainly in the case of the UK, this began to be seen in more frequency after the creation of the group.²⁰⁶ It is too large of a coincidence that XR should arise with an aim of generating governmental change and shortly after it should happen. Whilst it stands to reason that other factors will have had a part to play it can be said with confidence that XR have been successful in communicating their demand for governmental declarations of climate emergency.

Whilst it is established that XR have been somewhat successful in their first aim it is important to understand what this means in terms of the climate and for XR. The term 'climate emergency' whilst signalling a need for direct and drastic action does not actually hold a single definition in terms of what the government's actions should be.²⁰⁷ This, therefore, means that local governments may decide what the term means for themselves. It raises the question of just how seriously the government will actually take this declaration, especially as the UK's own Environment Secretary Michael Gove did not initially back the demands made by Labour to declare an emergency.²⁰⁸ Indeed, the UK's pledges are somewhat lacking in ambition when compared to the pledges made by several other local governments. For comparison many local councils have stated their wishes to become carbon neutral by 2030 while the UK government initially set its own target to 'reduce carbon emissions by 80% (compared to 1990 levels) by 2050'.²⁰⁹ The motion to declare a climate emergency is also not legally binding meaning that little action may come of this declaration.²¹⁰ The UK has since pledged to '[i]ncrease the ambition of the UK's climate change targets under the Climate Change Act 2008'.²¹¹ There is concern surrounding this however as whilst the first two targets of this Climate Change Act have been met, seeing a reduction in carbon emissions by 44% in 2018 compared to levels in 1990, the Committee on Climate Change (CCC) have stated that the UK is not on target to meet their fourth target.²¹² Additionally, these carbon calculations '[exclude] emissions from international aviation, shipping and import' a matter Thunberg has called 'very creative carbon accounting'.²¹³ With this in mind, despite the fact that the government has declared a climate emergency, it seems that it

²⁰⁶ 'Climate Emergency Declarations' <<https://climateemergencydeclaration.org/climate-emergency-declarations-cover-15-million-citizens/>> [accessed 26/07/2019].

²⁰⁷ 'UK Parliament declares climate change emergency', *BBC*, (1st May 2019) <<https://www.bbc.co.uk/news/uk-politics-48126677>> [accessed 13/08/2019].

²⁰⁸ *Ibid.*

²⁰⁹ *Ibid.*

²¹⁰ *Ibid.*

²¹¹ 'UK "climate emergency": What does it really mean?', *Open Access Government*, (2nd May 2019) <<https://www.openaccessgovernment.org/uk-climate-emergency/64313/>> [accessed 13/08/2019].

²¹² 'How the UK is progressing', *Committee on Climate Change*, (n.d.) <<https://www.theccc.org.uk/tackling-climate-change/reducing-carbon-emissions/how-the-uk-is-progressing/>> [accessed 13/08/2019].

²¹³ Rachel Schraer, 'Climate Change: Is Greta Thunberg right about the UK carbon emissions?', *BBC*, (26th April 2019) <<https://www.bbc.co.uk/news/science-environment-48025650>> [accessed 13/08/2019].

is still not effectively telling the whole truth as stating the reduction in carbon emissions whilst excluding 'international aviation, shipping and import' is very misleading.²¹⁴

This lack of ambitious direction perhaps signals a lack of communication on the part of XR. Despite their success in achieving their first aim the aim itself was perhaps too vague. XR address this issue in the FAQ section on their own website stating that they 'have to write things down in short 'soundbites' that are communicable as headlines'.²¹⁵ Whilst it is true that a movement such as XR requires catchy blanket statements in which to draw people in and give a larger overall aim. This, however, can result in a lack of overall direction. This is potentially what is being seen in terms of the first of XR's demands, and that whilst the UK government has indeed responded to them and declared a climate emergency, in terms of what this means legally and for the actions that will be taken, things are still very unclear. XR's own communication potentially failed them in this respect as they never made clear what they wanted from a declaration of a climate emergency. This stretches further to those who follow the group. Whilst many may have their own personal ideas about what a climate emergency should mean this has not been compiled into one clear idea, nor has it been effectively communicated to the government or to the masses. The concern here could be that now that the first demand has been met there will be a slowing down of progress as those who are perhaps less aware of the urgent nature are lulled into a false sense of security that something is being done. This could have perhaps been avoided with a better communication about what a declaration of a climate emergency should mean and what it should result in in terms of governmental action. Instead the government has delivered what has been asked for by XR and the masses who came out in support of them during protests and yet it seems that relatively little has changed or been achieved.

The second aim of XR is fairly similar to that of the first. This aim is the 'Act Now' and is expanded on the XR website to state that the '[g]overnment must act now to halt biodiversity loss and reduce greenhouse emissions to net zero by 2025'.²¹⁶ In a sense this second aim set out by XR is their desired result of their first aim, for governments to tell the truth.²¹⁷ As already discussed the first aim of XR has been met by the UK government and yet despite declaring a climate emergency the reality of what this means falls short of XR's second demand.²¹⁸ The UK's government has set itself a timeline over five times as long as that set out by XR and initially only pledged to reduce

²¹⁴ *Ibid.*

²¹⁵ 'FAQS' <<https://rebellion.earth/the-truth/faqs/>> [accessed 26/08/2019].

²¹⁶ 'Our Demands' <<https://rebellion.earth/the-truth/demands/>> [accessed 26/08/2019].

²¹⁷ *Ibid.*

²¹⁸ Robin McKie, 'Slow burn? The long road to a zero-emissions UK', *The Guardian*, (21st April 2019) <<https://www.theguardian.com/environment/2019/apr/21/long-road-to-zero-emissions-uk>> [accessed 24/08/2019].

emissions to 80% of those in 1990.²¹⁹ As established earlier this could be due to somewhat of a lack of effective communication of XR's second demand. After taking advice from the CCC the UK government changed this target to reflect a 100% reduction, which reflects XR's demands of a net zero target.²²⁰ Despite this there is little to no action being seen by the UK government in terms of tackling climate change. The 2019 progress report by the CCC highlights this lack of action.²²¹ This report was laid before parliament on 10th July 2019 just over two months after the government had declared a climate emergency. The report highlights the fact that '[a]s the existing carbon budgets were set on a cost-effective path to achieving an 80% reduction in UK greenhouse gas emissions by 2050, a more ambitious long-term target is likely to require outperformance of the carbon budgets legislated to date'.²²² Even more concerning is the fact that the report documents that '[p]rogress is generally off-track in most sectors' for the initial targets set out in 2008.²²³ It is clear that the government are failing to act in a way that is required for their climate targets to be met. As for the targets set by XR, it seems, to date, that they are fighting a losing battle.

It is important to ask why we are seeing such a lack of action on the part of the government when it comes to carbon emissions. While there are undoubtedly many reasons behind this, for the sake of this case study we must look at this in terms of the work done by XR. One potential issue already discussed is the lack of effective communication about XR's first and second demands in terms of exactly what they expected from the government in terms of legally binding pledges and actions. While this can be seen in terms of their demands being too vague it also brings to question the amount of science used by the group.²²⁴ While the first demand of XR lacked specifics about what they wanted a climate emergency to entail, this second aim is lacking in scientific explanation. XR are clear about their aim for the UK's carbon emissions to be at net zero by 2025, but they are not so clear on how this would be achieved.²²⁵ Perhaps due to this lack of detail there are many people who question whether this target is even achievable.²²⁶ Robin McKie discussed this in an article written for *The Guardian*. He begins his piece by writing as if from the future in a carbon neutral Britain detailing how different even the simplest everyday tasks would be if we are to achieve the second demand of XR. These differences include even the smallest detail such as making 'yourself a cup of tea – from water boiled on a hydrogen-burning kitchen stove' or your

²¹⁹ Roger Harrabin, 'Climate Change: UK government to commit to 2050 target', *BBC*, (12th June 2019) <<https://www.bbc.co.uk/news/science-environment-48596775>> [accessed 26/08/2019].

²²⁰ *Ibid.*

²²¹ 'Reducing UK Emissions: 2019 Progress Report to Parliament', *Committee on Climate Change*, (10th July 2019) [online] <<https://www.theccc.org.uk/publication/reducing-uk-emissions-2019-progress-report-to-parliament/>> [accessed 26/08/2019].

²²² *Ibid.*, p. 17.

²²³ *Ibid.*, p. 51.

²²⁴ 'Our Demands' <<https://rebellion.earth/the-truth/demands/>> [accessed 26/08/2019].

²²⁵ 'FAQS' <<https://rebellion.earth/the-truth/faqs/>> [accessed 26/08/2019].

²²⁶ Matt McGrath, 'Extinction Rebellion: What do they want and is it realistic?', *BBC*, (16th April 2019) <<https://www.bbc.co.uk/news/science-environment-47947775>> [accessed 26/08/2019].

lunch consisting of ‘a sandwich made of meat grown in a laboratory’.²²⁷ The details written by McKie may seem extreme and farfetched and yet the reality is that is the UK to become a zero emissions country then dramatic changes to everyday life are unavoidable.

The science behind the second demand of XR is missing, it is simply not enough to state that the aim is to reduce carbon emissions to net zero by 2025 without stating how this would be achieved. Shapin highlights the need for trust in the creation of knowledge and how as a society we hold that trust in science.²²⁸ While the XR talks and information given through their online sources, such as interviews with members posted to their YouTube channel, do go into a bit more detail as to how their demands should be achieved these sources require the public to already have an interest in XR and the climate. As discussed in earlier chapters, it is the protests and acts of civil disobedience that draw in public attention from those who may have never thought about the climate crisis before or who had never heard of XR. These methods also draw in a lot of media attention which in turn helps to educate the public about XR and the work they are doing. The XR website and social media pages are far more likely to be used by those already fairly informed about the climate crisis and within interest in following or becoming part of XR. It is unlikely that a person with no knowledge of the group or little interest in the climate will end up on their website or watching one of their videos. It is, however, far more likely that this type of public will stumble on a news story covering an XR protests or event and may read about their demands through this. Unfortunately, in these cases there is little communication occurring about the science behind how the demands will be or should be met. This is detrimental to XR succeeding with their second demand. As already discussed, the changes that will be required of the general public will be huge, lives will be dramatically changed.²²⁹ How, therefore, is this to happen and to be accepted if the public is not made fully aware of just how different their lives must become are we to fight the climate issues we are facing today?

Effective communication of the science behind the demands of XR is not only important for the general public's understanding of what must be done, but also for the governmental changes that are required to happen. This results in there being a lot of contention around whether or not the 2025 target is even possible.²³⁰ A question that is even debated amongst XR members, many of whom believe a target of 2029 would be more achievable.²³¹ This lack of belief may also lead to a lack of motivation to act on the

²²⁷ McKie <<https://www.theguardian.com/environment/2019/apr/21/long-road-to-zero-emissions-uk>> [accessed 24/08/2019].

²²⁸ Steven Shapin, *How to think about science*, Podcast for CBC Radio's Ideas (2008).

²²⁹ Adam Vaughan, 'The Science behind Extinction Rebellion's three climate change demands', *New Scientist*, (25th April 2019) <<https://www.newscientist.com/article/2200755-the-science-behind-extinction-rebellions-three-climate-change-demands/>> [accessed 24/08/2019].

²³⁰ McGrath <<https://www.bbc.co.uk/news/science-environment-47947775>> [accessed 26/08/2019].

²³¹ Vaughan <<https://www.newscientist.com/article/2200755-the-science-behind-extinction-rebellions-three-climate-change-demands/>> [accessed 24/08/2019].

part of both the government and the public. Others, such as Lord Turner, the former chairman of the CCC, believe that the target could be met but ‘the cost of implementing such vast changes at that speed would be massive and hugely unpopular’.²³² Despite this, studies have shown that the majority of British voters support the UK cutting its carbon emissions to net zero.²³³ The fear that these cuts would be ‘unpopular’ with the public may therefore have a lot to do with the fact that much of the UK is largely uninformed about just what cutting out emissions will entail. Many lay the blame and responsibility on the larger corporations whose impact is much more significant.²³⁴ Although this is not necessarily a bad thing, the danger lies in people remaining in the dark about the actions they themselves must take. Whilst the corporations do indeed have the most impact on the climate, it is still up to the general population to change their own behaviours and actions in a way that correctly reflects the future we are aiming for.²³⁵ In addition to this, if more people came out in favour of dramatically changing their lives in favour of XR’s targets, it would increase the chances of the government accepting them also. This would be because they would no longer fear becoming unpopular with potential voters by implementing drastic changes. As it stands, not enough people are aware of the changes they must make and so life continues as before.

Another issue with neglecting the science in the demands made by XR is that government officials are more likely to back the targets of those with the science to back up their demands. This can be seen both in the lack of governmental response to the demands of XR, but also in the way they have responded to others.²³⁶ Already discussed is the way in which the first demand made by XR, to tell the truth, was achieved but lacked direction as there was no strong consensus made about what a climate emergency should actually mean. This has continued on to the second demand of XR, to act now. While clearer than their first demand XR have only set out what they want from the government rather than setting out a plan of how this should be achieved.²³⁷ Arguably this is not for XR to decide, but instead it should be for qualified climate scientists to consult the government on what steps should be taken. The issue is, however, that XR have not taken sufficient steps with the help of science to prove that their demands can actually be met. This means that the UK’s governmental officials are far more likely to confront larger scientific papers and reports to provide them with information on how to act. This may include reports such as the latest IPCC report

²³² McKie <<https://www.theguardian.com/environment/2019/apr/21/long-road-to-zero-emissions-uk>> [24/08/2019].

²³³ Sam Hall, ‘Public Attitudes to UK Climate Leadership - Ten Years Since the Climate Change Act’, *Bright Blue*, (17th August 2018) <<http://brightblue.org.uk/sam-hall-public-attitudes-to-uk-climate-leadership/>> [accessed 26/08/2019].

²³⁴ Byskov <<https://theconversation.com/climate-change-focusing-on-how-individuals-can-help-is-very-convenient-for-corporations-108546>> [accessed 26/08/2019].

²³⁵ Griffin, ‘The Carbon Majors Report’, p. 5.

²³⁶ Roger Harrabin, ‘Climate Change: UK can cut emissions to nearly zero by 2050’, *BBC*, (2nd May 2019) <<https://www.bbc.co.uk/news/science-environment-48122911>> [accessed 24/08/2019].

²³⁷ ‘Our Demands’ <<https://rebellion.earth/the-truth/demands/>> [accessed 26/08/2019].

provided by the UN.²³⁸ The issue with this lies in the fact that reports such as these remain highly politicised and therefore are often more conservative than groups such as XR would wish for.²³⁹ This also raises potential problems with the level of trust that the public holds in scientists. As already stated, Shapin highlights the importance of trust in the creation of knowledge, however, he also states that the current political and scientific climate has led to certain problems in the trust we hold in science as there are suspicions surrounding science as a profession being heavily reliant on investors.²⁴⁰ Science nonetheless, as Shapin states, must be trusted in some form as it is how we understand the modern world.²⁴¹ The UK has already seen the result of this as the original target made by the government to reduce emissions to 80% of those in 1990 was amended after consulting the CCC.²⁴² The CCC uses scientific data to demonstrate the ways in which carbon targets can be met, or are not being met, and saw the target raised to a reduction by 100%.²⁴³ The CCC, however, suggests a target of reducing emissions by 2050, not 2025 as XR are aiming for.²⁴⁴ It therefore stands to reason that had XR presented their 'Act Now' demand with the science to back it up, perhaps the government and the people would have had a better understanding of just what they should be aiming for rather than falling back onto the more conservative aims.²⁴⁵

This issue of highly politicised science brings us to XR's third and final aim, 'Beyond Politics', which demands for the creation of a citizens assembly.²⁴⁶ The reasoning behind this demand is that to date the government has been fairly conservative with the actions they have taken towards fighting climate change. XR believe that the creation of a citizens assembly would help to break the political 'deadlock' and provide the much needed action that is required to fight the crisis we currently find ourselves in.²⁴⁷ XR are asking for a concept discussed in detail by Latour, which is the removal of politics from matters of nature. Latour discusses the way in which '[i]f we mix facts and values...we are depriving ourselves of both autonomous knowledge and independent morality'.²⁴⁸ In a sense the trust is put back into science as a person's own morality is unable to influence the facts. When considering this last demand in light of some of the previous one's downfalls it would seem that XR may have benefited from putting this demand

²³⁸ IPCC <https://report.ipcc.ch/sr15/pdf/sr15_spm_final.pdf> [accessed 26/08/2019].

²³⁹ 'About the IPCC', NIPCC, (n.d.) <<http://climatechangereconsidered.org/about-the-ipcc/>> [accessed 26/08/2019].

²⁴⁰ Shapin, *How to think about science*.

²⁴¹ *Ibid.*

²⁴² Harrabin <<https://www.bbc.co.uk/news/science-environment-48596775>> [accessed 24/08/2019].

²⁴³ 'About the Committee on Climate Change', *Committee on Climate Change*, (n.d.) <<https://www.theccc.org.uk/about/committee-on-climate-change/>> [accessed 26/08/2019].

Harrabin <<https://www.bbc.co.uk/news/science-environment-48596775>> [accessed 24/08/2019].

²⁴⁴ 'Reducing UK emissions' <<https://www.theccc.org.uk/publication/reducing-uk-emissions-2019-progress-report-to-parliament/>> [accessed 26/08/2019] (p. 8).

²⁴⁵ 'Our Demands' <<https://rebellion.earth/the-truth/demands/>> [accessed 26/08/2019].

²⁴⁶ *Ibid.*

²⁴⁷ *Ibid.*

²⁴⁸ Bruno Latour, *Politics of Nature: How to Bring the Science into Democracy* trans. by Catherine Porter (London: Harvard University Press, 2004), p. 4.

first as opposed to third. With a citizen's assembly in place the first and second aim of XR would become far easier to achieve, but also would be clearer in the specific details such as what a climate emergency should mean, and how certain targets should be achieved. As discussed earlier a large issue with the second demand of XR, to act now, was the fact that they included little advice on how their emission targets should be met. The lack of scientific expertise led to many government officials, and members of the public, dismissing their target as unachievable, with it even being debated by members of XR themselves. XR note that if a citizen's assembly were to be established that the members would have equal access to information provided by experts.²⁴⁹ It stands to reason that this would be essential were the citizens assembly to rule correctly on matters concerning climate action. Despite this, however, it seems that this input from experts is needed in the earlier two demands made by XR. Instead in the recent events we have seen the UK government turn to their own expert group the CCC resulting in the current target for the UK to reach zero emissions by 2050.

This last demand is particularly interesting when thinking about the dialogue model. A citizen's assembly is essentially the dialogue model in action. It brings together people from all backgrounds and walks of life to discuss, in this case, the current climate issues and ways in which it can be tackled. To do this, members must be informed about the science but also need to be willing to engage with what this raw data means in terms of their everyday life. Through this they may then find solutions which can be made into government policy and made into everyday solutions for all to live by. This, as already touched on, is Secord's description of how communication is important both in the transfer of knowledge but also the making of fact.²⁵⁰ While few citizens assembly's exist in today's political world and yet they have been shown to work very successfully.²⁵¹ Take for example the case of the citizens assembly in Ireland which in 2017 broke a long standing political deadlock over the issue of abortion.²⁵² Just as in Ireland, the citizens assembly XR hopes to see put in place, would break the political deadlock over matters of climate emergency.²⁵³ Not only this but they would offer solutions in a representative and uncorrupted sphere that is unaffected by politics or industry investments.²⁵⁴

Despite the fact that there appears to be little sign of a citizens assembly on climate change the UK's government has begun to discuss it as a viable option.²⁵⁵ It was reported towards the end of June that six parliamentary committees have announced plans for the creation of a citizens assembly to advise on the steps that should be taken

²⁴⁹ *Ibid.*

²⁵⁰ Secord, *Knowledge in Transit*, p. 654.

²⁵¹ 'Our Demands' <<https://rebellion.earth/the-truth/demands/>> [accessed 26/08/2019].

²⁵² *Ibid.*

²⁵³ *Ibid.*

²⁵⁴ *Ibid.*

²⁵⁵ 'Climate Change: MPs announce citizens' assembly', *BBC*, (20th June 2019) <<https://www.bbc.co.uk/news/uk-politics-48706352>> [accessed 26/08/2019].

to reach the carbon emissions targets set by the CCC.²⁵⁶ In the BBC report about this XR are listed as one of the main reasons behind this suggestion, naming the disruption caused by their protests as a driving factor for the focus on climate issues that we are seeing from the UK's government.²⁵⁷ In addition to this, the government is aware that the changes that are required to happen will heavily impact the lives of everyday people. As of such, it is in their best interests that they ensure the public are educated on these matters and are able to have an input and influence in determining what actions must be taken. The support for XR through large turnouts at their protests demonstrates a support for change from the side of the public, however, a lack of specific details as to exactly what this change should entail could give cause for concern on the part of government officials who rely on the public vote. Greg Clark the Energy Secretary made this very clear when he stated that '[i]nitiatives to engage the public will be vitally important to appreciating the challenges of getting to net zero and giving people a say in shaping the future policies to achieve the target'.²⁵⁸ While XR have not, to date, been successful in achieving a citizens assembly they have certainly effectively communicated the need for one and begun the discussions that may way lay to the creation of one in the near future.

²⁵⁶ *Ibid.*

²⁵⁷ *Ibid.*

²⁵⁸ *Ibid.*

Conclusion

Throughout this thesis the work of, and reactions towards XR has been studied with a view to understanding how they use certain communication tactics to generate awareness about the climate crisis we find ourselves in and to generate action from the public and government. The three demands of XR are central to understanding their work as these aims are kept in the minds of organisers and followers throughout the work that they do. These demands also encapsulate the necessity of communicating successfully to the general public because it is only with their support and action that XR can be successful in achieving their vision. It is clear that in order to achieve the target of net zero emissions by 2025 there are huge changes required in society and governmental policies.²⁵⁹ In order to generate such changes XR have targeted their approaches at generating enough public support to achieve policy changes. This has been done through public protests and acts of civil disobedience, which, as discussed in Chapter One, generate a huge amount of attention both from the surrounding public but also from the media, creating a far-reaching impact. Coupled with this, XR have also employed a number of other communication tactics such as their online presence and arranged public talks. These methods work well alongside the protests. While the protests and civil disobedience does not necessarily give the public much information about the climate crisis, except a few choice facts, it does grab their attention and hopefully pique an interest to find out more. With this interest piqued it is more likely that a person will discover XR's website, information about upcoming events and talks, social media pages, or YouTube videos. These then work to impart a more detailed level of communication, in which more climate facts are given and information on how to act or what to do next are presented. The internet is also used by XR to organise further protests meaning those who were potentially drawn in by such an event are able to join the next which in turn generates a larger following creating more of an impact as it continues.

This popularity is important for achieving the demands set out by XR. Whilst many of their techniques are aimed at the general public, XR's aims are to generate change in a political sphere. Taking into account the 'bottom up' approach of political change generating enough public interest and uproar about the topic of climate change will lead to a political involvement.²⁶⁰ In addition to this, XR are also aiming for a separation of politics from matters relating to the climate, much like the ideas of Latour in his book, *Politics of Nature*.²⁶¹ This was in relation to the lack of trust and action surrounding climate science due to the political impacts climate action would have. XR hope to take the politics out of climate matters through the creation of a citizens assembly which would act in reaction to the first two demands of the group, the declaration of a climate emergency and achieving net zero emissions by 2025.²⁶² While XR themselves state that

²⁵⁹ 'Our Demands', <<https://rebellion.earth/the-truth/demands/>> [accessed 26/08/2019].

²⁶⁰ Matland, 'Synthesizing the Implementation Literature', (pp.148-149).

²⁶¹ Bruno Latour, *Politics of Nature*.

²⁶² 'Our Demands', <<https://rebellion.earth/the-truth/demands/>> [accessed 26/08/2019].

‘we try to stay motivated by action being the right thing to do (virtue ethics) rather than taking action because we think it will work (utilitarian ethics)’ it is clear that XR are achieving something.²⁶³ Aiming for the involvement of a mere 3.5% of the population, XR are slowly generating the changes they have set out to achieve.²⁶⁴ Whilst this level of support may seem too small the noise generated by XR to date is already huge and people from all over the globe are talking about this group that started a mere ten months ago. XR’s methods through which they generate media attention and present alarming facts with a hopeful twist are all working towards creating a better world.

²⁶³ ‘FAQS’ <<https://rebellion.earth/the-truth/faqs/>> [accessed 26/08/2019].

²⁶⁴ ‘Act Now’ <<https://rebellion.earth/act-now/>> [accessed 26/08/2019].

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