

## Social movements and the (mis)use of research: Extinction Rebellion and the 3.5% rule

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### Abstract

*The misuse of academic research can lead social movements to engage in strategies that may be inefficient or misguided. Extinction Rebellion argues, based on research by Chenoweth and Stephan (2011), that once 3.5% of the population of a state is mobilised in sustained protest, that success is guaranteed. But the data this research is drawn from consists of campaigns against autocratic regimes and occupying military forces, rather than the liberal democratic contexts that Extinction Rebellion is engaged in. I argue that Extinction Rebellion is misusing this research, and therefore focusing upon mass, sustained disruption in capital cities, rather than alternative, possibly more effective strategies. Through an exploration of how one social movement misuses research by applying it to a context to which the data does not apply, I argue for closer engagement between academics and the social movements that they study. This engagement will improve our understanding of the work of social change, provide social movements with insights to make them more effective, and facilitate the accurate interpretation of academic research in order to prevent its misuse.*

### Keywords

Extinction Rebellion, cognitive praxis, repertoires of contention, diffusion, misuse, research, climate change, protest, strategy, tactics.

### Introduction

Extinction Rebellion (XR), a climate change movement that launched in November 2018, has quickly risen to prominence after engaging in highly visible and disruptive actions. XR seeks to achieve its goals by both educating and informing, but also disrupting ‘business as usual’, creating a sense of crisis, and putting direct pressure on elected leaders to enact change quickly. XR’s founders paid particular attention to social movement research when forming XR and developing its strategies of change, seeking to make XR successful in achieving its goals (Hallam, 2019a; The Economist, 2019). Since its launch XR has spread worldwide, forming a significant part of the global climate

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movement, with over 485 local groups in more than 60 countries (Iqbal, 2019; Feder, 2019).

This article explores XR's use of nonviolence research, particularly the '3.5% rule'. The 3.5% rule is drawn from empirical research done by Chenoweth and Stephan (2011) on resistance campaigns from 1990-2006. In the dataset developed by Chenoweth and Stephan every campaign that mobilised at least 3.5% of the population in sustained protest was successful. However, Chenoweth and Stephan's data relates to state-wide systemic change, mainly overthrowing autocratic governments, and does not apply to change in liberal democratic states. Yet XR has adopted the 3.5% rule as being relevant to the liberal democratic context that it operates in, spreading this understanding throughout its global movement. I therefore argue that XR is misusing research by applying it to a context that it does not relate to. This misuse has informed XR's strategy of mass mobilisation and disruptive actions, and led it away from alternative strategies that may be more useful.

Through this case study focusing on XR, I seek to shed a light on how social movements understand, diffuse, and use academic knowledge, and the implications of that knowledge being misused. First, I will explore the literature about social movement knowledge transfer and the misuse of academic knowledge, arguing that what social movements 'know' about social movement research informs the strategies that they adopt. Then I will take a deeper look at the work of Chenoweth and Stephan which has led to the '3.5% rule', indicate why I believe this research is being misused by applying it to contexts to which it does not apply, and the implications of this misuse by XR. Finally I conclude by arguing that social movements and the researchers engaged with them need to be aware of the limits of research and its application to new contexts, but that this wariness should lead to more academic engagement with social movements to successfully operationalise social movement knowledge.

I engage in this work as a supporter of, participant in, and researcher engaged with XR. I am involved with XR at the local level through my membership and research work with Extinction Rebellion Ōtepoti Dunedin, nationally with Extinction Rebellion Aotearoa New Zealand, and globally as a member of the wider climate change movement. My relationship with XR explicitly calls for research that makes a valuable contribution to informing the goals and processes of social change. This activist-scholar approach is my response to the call by Meyer (2005) for social movements and their tactical choices to be informed by quality research rather than anecdote and assumption. I pursue this work through militant ethnography, a politically engaged and collaborative form of participant observation carried out from within grassroots movements (Juris, 2007). This positionality has enabled me to see the 3.5% rule diffuse throughout XR and other social movements globally, analyse the impact of this diffusion on discussions within XR about the best way to achieve social change, and provided me with the knowledge to critique this rule within the XR context. My approach therefore is not to damningly criticise XR and their work, but

rather to engage constructively through sympathetic critique in order to make its strategies more effective.

### **Knowledge, document analysis, cognitive praxis, repertoires of contention, and diffusion**

There is a substantial literature noting the significance of activist knowledge systems and discussing the problems of academics ‘colonising’ this knowledge for their benefit (see, for example Bevington and Dixon, 2005; Choudry, 2015; Cox and Fominaya, 2009; Cox, 2014; Cox, 2015; Cox, 2018; Eyerman and Jamison, 1991; Routledge, 2013). But it is less clear how social movements use academic research on the strategies and goals of social movements. First, I will define my understanding of knowledge and outline the document analysis methodology that I have used in this research. I will then explore our lack of understanding of how social movements use research by exploring how knowledge is operationalised through cognitive praxis – the identities and strategies of activists constructed through knowledge - and repertoires of contention – the set of tools of social change that activists adopt. Then I will investigate knowledge transfer via diffusion, and the small body of literature that explores the diffusion of unsuccessful strategies of change.

A broad understanding of knowledge includes not only academic research, but also the documents, discourses, and beliefs that help construct collective understandings, as well as the experience and wisdom of individuals (Ward et al., 2009). This broad understanding of knowledge encompasses not only what is ‘known’ through research, but what is believed to be true, through interpretation, custom, experience, and beliefs. It is this broader definition of knowledge that I am using as I explore how research enters commonplace understandings.

In this research I have used document analysis methodology to collect and analyse relevant materials. Document analysis is ideal for investigating the diffusion of knowledge around a global network, because documents have been written with the adopting audience in mind, rather than moderated by subsequent revision or retrospective assessments such as interviews (Bowen, 2009). In this way I am assessing documents for the purpose for which they were written, and analysing whether and how they have been adopted by receivers. Much of the source material by which I have assessed XR’s adoption of the 3.5% rule is via documents produced by various XR groups, and also prominent individuals in XR. Some documents are published by media independent of XR, but in these instances the documents are either written by an XR spokesperson and published by the media as an opinion piece, or presented by an XR spokesperson during the course of an interview which is available unedited. I am therefore confident that these materials represent the unmediated opinion of representatives of XR. My document analysis is by no means exhaustive, however in my research and involvement with XR I have found only one instance of a significant challenge to accepting the 3.5% rule as

relevant from within XR – a series of think pieces by XR spokesperson Rupert Read that I will explore further below (Extinction Rebellion, 2019a). Other than this, there seems to be widespread support and diffusion of the 3.5% rule as both fact, and relevant to XR.<sup>2</sup>

In relation to the role of knowledge in social movements the concept of ‘cognitive praxis’ is useful (Eyerman and Jamison, 1991). Cognitive praxis is the ways in which individual and collective identities and the strategies of social movements are constructed by knowledge (Jamison et al., 1990; Eyerman and Jamison, 1991). There has been considerable attention paid to social movements and their processes of knowledge construction (see, for example Gillies, 2014; Cox, 2018; Chesters, 2012; Cox, 2014; Choudry, 2015; Cox, 2015; Tarrow, 2011). Social movements use knowledge to build their collective structures, support their claims, and create strategies and tactics to pursue change. Activist knowledge is often created through praxis, an understanding of knowledge and social change that accepts that the two are inseparable, and that knowledge is tested in encounters within movements and between movements and their opponents (Cox, 2014; Foley, 1999; Rosewarne et al., 2014; Tilly, 2008; Eyerman and Jamison, 1991). Social movements and the individuals in them therefore construct meaning not only through defining themselves as activists seeking social change, but in choosing, rejecting, and implementing strategies to seek that change (Eyerman and Jamison, 1989). These choices are mostly supported by theory, experience, and anecdote rather than systematic research, and further developed and reinforced through training, group dynamics, and collective activist experiences (Meyer, 2005; Ferree, 2003). Movements therefore often become both organisationally committed to a cognitive praxis that consists of opinions and feelings about ways of operating, and understandings about why alternative approaches are wrong (Cox and Fominaya, 2009).

A cognitive praxis helps to construct a ‘repertoire of contention’. Repertoires of contention are the strategies and tactics that form part of the set of tools a movement uses to overcome obstacles in their struggle (Tilly, 2008; Tilly, 1978; Piven, 2006). Repertoires of contention operate in historical, social, and cultural contexts, and are influenced by the dynamics of struggle between a movement and its opponents (McAdam, 1983; Crossley, 2002; McCammon, 2003). What activists know and believe, and what others expect activists to do influences the nature of a movement’s repertoire (Tarrow, 1993). As such repertoires reflect not only what activists collectively believe are acceptable methods of seeking change, but also what is believed to be most successful in the context that they operate in (Soule, 1999; Soule, 1997). In exploring XR’s adoption of the 3.5% rule I am therefore seeking to understand knowledge transfer at the level of cognitive praxis – how a particular understanding of research has led to the adoption of a repertoire of contention that views mass

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<sup>2</sup> I am aware of individuals outside of XR who have raised concerns with its use of the 3.5% rule (see, for example, Ahmed, 2019 and Berglund, 2019).

mobilisation as the best way to create social change in response to the climate crisis.

Knowledge transfer has been studied extensively in social movements, particularly the diffusion of knowledge. Diffusion is the spread of an idea or innovation across social institutions and through social networks (Walsh-Russo, 2014; Rogers, 2001). In social movements innovative tactics, frames, repertoires, and ideologies may all diffuse within and between movements (Soule, 2007; Soule and Roggeband, 2018). Diffusion occurs via a dynamic process in which both transmitters and adopters have agency. Transmitters may be actively engaged in the transmission process as they promote their knowledge and seek to push it into new contexts. Receivers may also facilitate diffusion by actively seeking out an innovation, considering its value, the context from which it came, how successful it has been, and its applicability to their own context (Roggeband, 2007; Rogers, 2001; Soule and Roggeband, 2018; Roggeband, 2007). They will then reconceptualise elements of it based on their experience and perceptions of differences between the transmitting and adopting contexts (Roggeband, 2007; Soule and Roggeband, 2018). This often requires the generalisation and abstraction of an idea from a particular reality into a general frame that can be reapplied more globally (Tarrow, 2005). Diffusion can create risks for social movements if an innovation is brought into a context where local political culture, institutions, or the reaction of the wider population make the innovation less successful or even dangerous (Soule and Roggeband, 2018). Particularly relevant for my research is the risk that a strategy that is successful in a transmitter's context, may not be successful in the receiver's context.

There are numerous factors that improve the likelihood that a repertoire will be diffused: the similarity of the transmitter's and adopter's identity and context; the nature of the repertoire and how modular and transferable it is; the adopting movement being non-hierarchical and decentralised; structures and networks that link the transmitter and adopter; positive media attention highlighting the innovation; successful action on the part of the transmitter using the repertoire; the innovation being particularly creative or 'catchy'; and the existence of a broker, an individual who helps translate and transmit knowledge to make it more accessible (Walsh-Russo, 2014; McAdam and Rucht, 1993; Tarrow, 1993; Soule and Roggeband, 2018; Strang and Soule, 1998; Morris, 1981; Strang and Meyer, 1993; Chabot, 2010; Wood, 2012). Brokers often champion the adoption of an innovation by incorporating it into a broader theory of change which assists diffusion by situating the innovation amongst familiar cultural practices and knowledge (Strang and Meyer, 1993). When transferring scientific knowledge to non-scientific groups the presence of an individual with higher education in the receiving group improves their satisfaction with knowledge transfer (Bunders and Leydesdorff, 1987).

What examples do we have of research that explores the diffusion of unsuitable repertoires of contention in social movements? Soule (1999) explores the diffusion of an unsuccessful innovation by American college activists in the anti-apartheid divestment movement. In the mid-1980s, college activists'

construction of replicas of South African shantytowns on American campuses was a popular tactic that quickly spread throughout the divestment movement. Yet colleges where shantytowns were employed as a tactic divested slower than colleges where it was never used. Soule (1999) argues that shantytowns diffused successfully because it was a tactic that was compatible with the values, experiences, and needs of potential adopters. It met their understanding of material conditions in South Africa, provided a visible and direct challenge to colleges, and was visually and physically similar to the sit-in, a tactic that was well understood in the American context due to the civil rights movement. It spread because of a social construction (by activist networks and media attention) that it was an effective tactic. Students monitored other campuses for cues on possible tactical innovations, assuming that it was successful because of its immediate impacts upon the targeted campus and widespread media attention, rather than assessing whether the tactic achieved the desired goal of divestment (Rogers, 2001; Soule, 1999). The success of a tactic is difficult for groups to measure, so social movements may instead use proxies for success such as media attention or a lack of state repression when considering adoption (Koopmans, 2004). The diffusion of repertoires to new contexts may therefore say more about the internal dynamics of social movements and their need to find strategies and tactics that are successful, than the quality of the repertoire. These dynamics and the need to find answers to complex problems, I will argue, have led to misuse by Extinction Rebellion.

I have built a picture of the diffusion of movement strategies and tactics, particularly the diffusion of unsuitable repertoires, in the absence of an extensive literature on the misuse of research by social movements. This picture is based upon my conceptualisation of the work of social movements as occurring within repertoires of contention that bound the strategies and tactics that movements view as acceptable and effective, and cognitive praxis, the ways in which activist identities and strategies of change are constructed by knowledge through struggle. The knowledge that helps construct a cognitive praxis diffuses between contexts through a number of means, particularly knowledge brokers, who access, translate, and spread academic knowledge to social movements. I have also outlined how a document analysis methodology will be used to analyse these concepts in relation to XR. I will now explore the cognitive praxis that informs XR's repertoire of contention.

### **Nonviolence research and *Why Civil Resistance Works***

XR is an unusual social movement because as well as being informed by research on climate science, it has paid close attention to social scientific knowledge on the structures and strategies of social movements (Hallam, 2019a). This social movement research includes strategic issues such as organisational structures and theories of change, but also practical issues such as the best ways to welcome people to XR meetings and encourage them to return. In particular the civil disobedience research by Chenoweth and Stephan (2011) and their 3.5% rule has guided XR's theories and strategies of change.

However, the selection of research that supports preferred arguments, and the construction of conclusions that are not supported by data are common risks in the application of research. Research is a contested, political process, rather than linear and value-free (Gillies, 2014; Tseng, 2012). In this section I will provide an overview of Chenoweth and Stephan's work before explaining why I believe that XR is misusing this research by applying it to a context that it does not relate to.

Despite the considerable influence of nonviolence theories on social change movements, it was not until Chenoweth and Stephan published *Why Civil Resistance Works: The Strategic Logic of Nonviolent Conflict* that there was a quantitative analysis of nonviolent movements which proved that they were more successful than violent methods of social change, and suggested reasons for this success. The nature and content of the Nonviolent and Violent Conflict Outcomes (NAVCO 1) dataset developed by Chenoweth and Stephan for this research is quite significant for my argument, so I will explore it in some depth. The NAVCO 1 dataset comprised 323 resistance campaigns between 1900 and 2006 compiled from multiple sources. Resistance campaigns were defined as "a series of observable, continuous tactics in pursuit of a political objective" that fell into three categories: anti-regime, anti-occupation, and secessionist. (Stephan and Chenoweth, 2008: 16) Cases were considered violent if they committed a significant amount of violence and nonviolent if violence was an insignificant part of the campaign. Campaigns were coded as having three levels of success: success, limited success, and failure. For a campaign to be successful it had to have achieved its stated objectives within two years of the end of the campaign, and the campaign had to be judged to have had a discernible effect on the outcome. Limited success occurred when a campaign obtained significant concessions, but not its stated objectives. If a campaign did not meet its objectives or achieve significant concessions, it was coded as a failure. The dataset included other variables such as the size of the campaign at its peak, whether the regime responded to the campaign violently, defections amongst the regime's security forces, external support for the resistance campaign and the regime, the democratic extent of the regime, and duration of the conflict (Chenoweth and Stephan, 2011; Stephan and Chenoweth, 2008).<sup>3</sup>

The results of this research were initially published in a journal article (Stephan and Chenoweth, 2008), and then as a book (Chenoweth and Stephan, 2011), both entitled *Why Civil Resistance Works: The Strategic Logic of Nonviolent Conflict*. The research reported a number of significant findings. Nonviolent social change was twice as likely to be successful as approaches that primarily used violence. The success rate for nonviolent campaigns improved over time, rising from 40% in the 1940s to 70% in the early 2000s. Nonviolent social change movements were much more likely to lead to democratic states than violent ones in the long term. Some of the factors influencing the likelihood of social change were also significantly different between the two methods.

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<sup>3</sup> For more information on the NAVCO 1 dataset, including updated versions, see:  
<https://dataverse.harvard.edu/dataverse/navco>.

Nonviolent campaigns were six times more likely to be successful in the face of violent repression. Shifts in loyalty from the regime to the campaign by the bureaucracy and/or military forces were significant in whether a campaign was successful, but only if the campaign was nonviolent. Lastly, they concluded that broad-based, diverse nonviolent campaigns were more successful because they were more resilient and difficult to repress (Chenoweth and Stephan, 2011; Stephan and Chenoweth, 2008).

Further work on the dataset by Chenoweth in preparation for a workshop with activists after the book was published led to the creation of the 3.5% rule.<sup>4</sup> Using the variable that measured participation, Chenoweth found that every campaign in their dataset that mobilised at least 3.5% of the population in sustained protest had been successful. She brought this conclusion to public attention in a TED talk given in 2013.<sup>5</sup> The 3.5% rule only relates to nonviolent campaigns, because they do not create the moral and practical barriers to participation that violent campaigns do, therefore making it possible for a significant proportion and range of a population to mobilise (Chenoweth and Stephan, 2011).

Chenoweth and Stephan's work on civil disobedience has had considerable influence on civil resistance and nonviolence studies. As the first piece of quantitative evidence about the effectiveness and longstanding impacts of nonviolent campaigns, it provided evidence to back up moral and theoretical arguments for nonviolence. But the research has also been particularly significant in social movements. A number of social movements have explicitly or implicitly referred to the research findings and the 3.5% rule. Erica Chenoweth's TED talk has been viewed over 220,000 times since November 2013 and has been promoted by social movements in their social media and communications. The TED talk video presentation has disengaged the research conclusions from the data on which those conclusions are based, which are only accessible in the book. This disengagement has made it easier to diffuse the research into a context that is unsupported by that data.

A cognitive praxis guided by Chenoweth and Stephan's research might emphasise nonviolence, engaging in actions that are likely to attract repression and loyalty shifts by state forces, and a focus on building a broad-based, diverse mass movement. In particular, it would seek to build that mass movement towards the sustained participation of 3.5% of the population in order to guarantee success. But this cognitive praxis would miss important information about how this research is focused on 'maximalist' campaigns seeking to overthrow oppressive regimes, resist foreign occupation, or secede from a state. Chenoweth and Stephan (2011: 13) outlined the limited context which their research draws data from:

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<sup>4</sup> See comments by Erica Chenoweth on her blog 31 July 2017 (<https://rationalinsurgent.com/2013/11/04/my-talk-at-tedxboulder-civil-resistance-and-the-3-5-rule/#comments>).

<sup>5</sup> <https://www.youtube.com/watch?v=YJSehRIU34w>.

This study makes a further qualification. Nonviolent and violent campaigns are used to promote a number of different policy objectives, ranging from increased personal liberties to obtaining greater rights or privileges for an ethnic group to demanding national independence. However this project is concerned primarily with three specific, intense, and extreme forms of resistance: antiregime, antioccupation, and secession campaigns.

A sample of partially successful or successful nonviolent campaigns in the data will include many familiar to students of the history of nonviolence. Examples include resistance to military occupation, such as Denmark and Norway during World War II, and Palestinian resistance to Israeli occupation in the first intifada (1987-1991), countries freeing themselves from foreign control, such as India (1947), Estonia, Lithuania, and Latvia (1989), and East Timor (1999), and countries overthrowing autocratic rulers, such as the Philippines (1986), Chile (1989), and Serbia (2000).

The dataset contains no campaigns seeking social change in liberal, Western democracies. There were no campaigns seeking democratic parliamentary support for social justice or environmental issues, no labour unions going on strike for better pay or conditions, and apart from anti-apartheid campaigns, no civil rights campaigns seeking legal or democratic rights. The dataset does not contain a single nonviolent campaign from the United States, United Kingdom, Australia, New Zealand, France, or Italy, all states where XR is actively campaigning. Other liberal democracies that appear in the dataset, such as Germany, Poland, Czechoslovakia, and Hungary either appear as a result of foreign occupation in the first half of the twentieth century, or attempts to overthrow the Soviet Union's rule in the latter half of the twentieth century (Chenoweth and Stephan, 2011).

It is therefore unclear what conclusions can be drawn from Chenoweth and Stephan's research by activists in liberal democracies seeking to force their governments to implement laws and policies that substantially change their nation's approach to the climate crisis. In particular, it is unclear from this research whether the 3.5% rule applies to liberal democracies. If a social movement in a liberal democratic country was successful in mobilising such a significant part of the population, it is unclear whether that would force the government to take action, and what that government action would be. Erica Chenoweth specifically acknowledged this in a radio interview in 2016, stating:

You know, if a nonviolent campaign is aiming for anti-war outcomes, or anti-nuclear outcomes, or economic and social justice reforms, or gender rights and things along those lines, indigenous rights. Do we see the same types of success rates of violent and nonviolent action? The answer is we don't know yet because those types of data collection procedures are not yet fully developed. But it's a really important direction for understanding what people in democracies might do, for example, to win their particular claims. (Saturday Morning, 2016).

My analysis of the NAVCO 1 dataset, the research publications that arose out of it, and the subsequent statement of one of the authors of that research, lead me to conclude that the data relates to one type of context, that of campaigns seeking to overthrow oppressive regimes, resist foreign occupations, and to secede from a state. In those contexts we can have some confidence about the accuracy of the conclusions drawn from the research, and the likelihood of the 3.5% rule being applicable. However the diffusion of this research to inform the cognitive praxis of campaigns in liberal democratic states involves the risk that the resulting repertoire of contention will not be effective in the new location. This does not mean that the research has no value to those movements. It does, for example, suggest that nonviolence is likely to be the best method of social change in liberal democracies, that repression by state actors may make social change more likely, and that broad-based, diverse movements are likely to be more successful. However, it does not provide evidence for those conclusions. In particular, it does not indicate whether a strategy of building a mass movement to reach a threshold of 3.5% participation will lead to successful outcomes. *Why Civil Resistance Works* therefore joins a body of nonviolence research that informs the work of activists in a range of liberal democratic societies, but which should be used with caution to develop strategies in those contexts.

### **Extinction Rebellion and *Why Civil Resistance Works***

Climate change activists are in the difficult position of seeking fundamental social change against resistant political and economic structures in relation to an issue that gets more urgent and difficult to resolve as time passes. Climate change presents an existential crisis for humanity, involving increased drought, sea levels, food shortage, forced migration, and conflict (IPCC, 2018). Resolving the climate crisis requires fundamentally changing the systems of energy, transport, farming, and consumption that define modern civilisation, and likely the structures of capitalism itself (Klein, 2014; Foster, 2001). Despite decades of scientific knowledge and climate activism raising these issues little progress has been made to resolve the crisis (Climate Action Tracker, 2019). The looming deadlines set by the Intergovernmental Panel on Climate Change to halve (2030) and reach (2050) net carbon become closer and more challenging as years pass with greenhouse gas levels in the atmosphere continuing to rise. Setbacks such as deforestation in Brazil, significant forest fires in California and Australia, and melting glaciers and arctic ice provide ongoing reminders of the scale and impacts of the crisis. For activists the failure of their activism to resolve a crisis that poses existential problems to humanity is a matter of considerable frustration (Rosewarne et al., 2014; Read, 2019; Hallam, 2019b). For XR, this frustration, combined with the belief that traditional methods of climate change activism have failed, has led to a cognitive praxis that rejects conventional campaigning, such as “sending emails, payments to NGOs and more reports” as ineffective, instead promoting mass disruptive action (Hallam, 2019b).

This section will describe how XR as an organisation, and significant individuals within it, explicitly and implicitly use Chenoweth and Stephan's research to construct this cognitive praxis. I have begun by outlining how the climate crisis influences XR's approach to social change. I will now provide evidence for XR's adoption and diffusion of the 3.5% rule, presenting XR's web pages and publications, as well as media opinion pieces and interviews in support of my argument. Lastly I will explore the significance of XR's misuse of *Why Civil Resistance Works*, particularly how this misuse drives XR towards a repertoire of contention that may not be relevant to the context they are working in, and away from alternatives that may be more useful. I argue that this indicates that they have been selective in their use of research.

There are numerous references to the 3.5% rule in XR's institutional outputs, such as XR USA's web pages:

This type of rebellion is premised on extensive research that shows conclusively that if 3.5% of the population in any country is actively engaged in sustained resistance over a concentrated period of time, governments inevitably concede or collapse under the pressure. The research shows that governments simply can't endure this many people engaging in serious disruption if it lasts for an extended period of time. (Extinction Rebellion US, 2019)

An XR video arguing for nonviolent direct action states that "social science shows it's twice as likely to succeed as violent campaigns and is achievable with a relatively small percentage of the population". The text "3.5% Participation = Always Successful" appears on screen (Extinction Rebellion NYC, 2019).

A significant element of XR's work is 'the talk', a public lecture given to outline the nature of the climate crisis and encourage attendees to become involved with XR and its actions. These talks are a significant part of XR's public information campaign and membership growth strategy. The talk explicitly references Erica Chenoweth and the 3.5% rule, with speaker notes arguing that "It turns out only about 1-3% of a population is needs [sic] to be mobilised to bring about massive social change or the fall of a regime" (Extinction Rebellion NZ, 2019). XR is therefore developing and diffusing a cognitive praxis which argues that the 3.5% rule is relevant to XR as an institution and the countries that it operates in to achieve social change.

Although *Why Civil Resistance Works* has influenced the strategies of XR organisations institutionally, it has also influenced significant individuals within the movement to act as brokers to assist diffusion of the 3.5% rule through XR globally and public media discourses. XR founder Roger Hallam refers to *Why Civil Resistance Works* in an opinion piece written for *The Guardian*:

Drawing on the groundbreaking research of Erica Chenoweth and Maria Stephan... we came to the conclusion that the only way to overcome entrenched

political power is through extensive campaigns of large-scale nonviolent direct action. (Hallam, 2019b)

In a video Hallam predicts that the model that Chenoweth and Stephan have explored in autocratic states will be successful in Western liberal democracies:

It's not guaranteed, but to say it won't happen is just completely social scientifically illiterate. It happens over and over again. And what's interesting here of course is that it's basically happening in a Western democracy for the first time. (Extinction Rebellion, 2019b)

In this statement Hallam has presented an internally contradictory argument – that social scientific evidence indicates that the 3.5% rule is correct, despite it never having occurred in the context to which he is applying it.

Hallam is not the only prominent actor within XR to argue for a strategy of mass mobilisation. XR co-founder Gail Bradbrook also argues for the relevance of the Chenoweth and Stephan's research to XR:

And we know from the research of Erica Chenoweth and Maria Stephan that you need between 1 and 3.4% of the population to come together and to be willing to support people to get on the streets and be on the streets themselves. (Democracy Now, 2019)

Both Hallam and Bradbrook, as leaders of XR and individuals who have engaged in postgraduate research, are acting as brokers to assist diffusion. Their prominence as founders and spokespeople for XR combined with the cultural capital associated with their academic knowledge assists with diffusion by lending institutional and theoretical authority to their framing of the 3.5% rule as relevant to XR's struggle. The nature of the 3.5% rule, which is simple to understand and presented by XR as applicable to all contexts, gives receivers hope that it is a solution to the difficult problem of achieving fundamental change in relation to how humans interact with their environment.

The 3.5% rule has diffused through the global XR network and into wider public consciousness globally. It has appeared in media stories about XR around the world. These include the BBC (Robson, 2019), Buzzfeed (Feder, 2019), and Stuff (Aotearoa New Zealand's main newspaper publisher) (Kirkeby, 2019). The 3.5% rule has spread so effectively that it has transferred from XR to other, related climate movements. The September 27<sup>th</sup> 2019 climate strike mobilised an estimated 170,000 individuals in Aotearoa New Zealand – exactly 3.5% of the population. Media stories on the event referred to *Why Civil Resistance Works* when explaining why this number was significant (RNZ, 2019). Greenpeace NZ posted on Facebook that “3.5% of the NZ population participated in the youth-

led climate strikes two weeks ago. This is enough to change our world” (Greenpeace NZ, 2019). Regardless of whether the 3.5% rule applies to a context, or is useful for social movements engaged in a campaign, it has diffused through social movements and wider public discourse as though it is.

The evidence above outlines the diffusion of a cognitive praxis that misuses Chenoweth and Stephan’s research by advocating that the 3.5% rule applies to liberal democratic contexts, rather than the autocratic states where the evidence for the 3.5% rule came from. The research is used to justify this praxis by claiming that evidence indicates that the strategy will always lead to success. Activist adoption of this cognitive praxis promotes a repertoire of contention that seeks to change society by mobilising 3.5% of the population to engage in mass disruption. But successful and unsuccessful campaigns occur in particular times and spaces, often through waves of contention in which social change occurs in a complex web of social relations and interactions between individuals, groups, social structures, and events (Koopmans, 2004). The 3.5% rule may not apply to the liberal democratic context that XR is applying it to, thus it is unclear whether a strategy of mass disruption will be successful. XR as an institution and prominent individuals within it have diffused the 3.5% rule as a simplistic solution to social change rather than recognising the complexity of how this occurs.

In December 2019 XR spokesperson Rupert Read addressed a XR group in Sheffield, UK, directly addressing the relevance of 3.5% rule to XR. His speech further developed his thoughts raised in a pamphlet ‘Truth and its Consequences’ published in August 2019 (Read, 2019). First Read noted that the 3.5% rule has never played out in a Western industrial democracy. He takes this argument one step further, believing that as XR moves further into the unknown, historically-based social science becomes less relevant, and XR needs to rely more on its creativity to resolve the climate crisis (Read, 2019). But perhaps his most insightful conclusion was that the movements in the NAVCO 1 dataset that achieved the 3.5% rule were never aiming to achieve that threshold. They were instead aiming to speak to a broad population of their country, mobilise them to seek change, and to be successful in doing so. Achieving the participation of 3.5% of the population should therefore not be the goal, but instead a side-effect of successful social change (Extinction Rebellion, 2019a). This insightful argument is the first significant sign I have seen within XR of a challenge to the applicability of the 3.5% rule, and a consideration of how mobilisation functions in successful movements – by social movements speaking to the issues that engage people, and creating actions that are both inclusive and successful.

Social movements should construct a cognitive praxis and develop a repertoire of contention that is relevant to the context in which they are operating. Autocratic governments have a limited set of tools to respond to social conflict and are more likely to resort to repression to control a social movement (Carey, 2010). Repression of mass movements by autocratic governments oversteps the fragile state of their rule and undermines their tenuous hold on power. This is

the context in which mass mobilisation is most effective as a demonstration of widespread opposition to autocracy (Koopmans, 2004; Sharp, 1973a; Sharp, 1973b). Liberal democratic governments have a broader and more flexible set of tools available to respond to social conflict. They may use laws and public discourse to restrict protest to ‘legitimate’ and/or ineffective methods, public rather than corporate spaces, or limit the role of state in order to shrink the spaces and topics of valid political engagement (Wilson and Swyngedouw, 2014). Social movements may feel compelled to engage in democratic government processes in order to appear constructive, and find that their mass nonviolent power is deflected into bureaucracy and/or technocracy (Martin, 1994). Democratic governments can engage with the challenges of social movements by adoption, where they accept some of the demands of a social movement in order to weaken their claims, or co-option where they weaken a social movement by offering movement leaders positions in government or other recognition. In this context, social movements are likely to be more effective using a repertoire of contention informed by a cognitive praxis of strategic and tactical diversity that activates a broad and diverse movement (Chenoweth and Stephan, 2011; McCammon, 2012; Wang and Soule, 2016). By adopting a repertoire that focuses on mass mobilisation and disruption, XR are choosing not to engage with this alternative cognitive praxis.

What would a repertoire of contention informed by a cognitive praxis of strategic and tactical diversity look like? Mainstream political tactics rejected by XR such as lobbying elites, supporting the work of mainstream NGOs, and preparing reports are obvious examples. Climate activists globally have been engaged in a campaign to get local bodies and state governments to declare a climate emergency. As at 19 June 2020, 1,732 jurisdictions in 30 countries, with a combined population of 820 million, have declared a climate emergency (Climate Emergency Declaration, 2020). This grassroots strategy is intended to raise the profile of climate change by having it discussed in communities, and resolved via local actions (Salamon, 2019). Probably the most successful climate activism over the past year has been the student strikes. Inspired by Greta Thunberg sitting outside the Swedish parliament in 2018, student strikes grew into a worldwide movement in just over a year, with over two million young people walking out of school during a global strike in March 2019, and over seven million people participating in September 2019 (Fridays for Future, 2019). Youth strikers have presented a considerable challenge and inspiration to world leaders in relation to climate action (Guterres, 2019). I do not present these alternatives as a complete list or as an endorsement. Indeed, some, such as climate emergencies have been critiqued both by academics and social movements (Cretney, 2019; Beaumont, 2019). However they demonstrate alternatives to a cognitive praxis and repertoire of contention informed by the 3.5% rule.

Climate activists can explore strategies other than mass disruption while still engaging in radical action, such as direct action against fossil fuel producers. Whether direct action targeted at fossil fuel producers is more effective than mass disruption of capital cities will depend on the context that social

movements are operating in and the way that they develop and enact their strategies of change. But these alternatives should not be abandoned because of a cognitive praxis constructed through the misuse of research. In June 2019 activists from Ende Gelände (Here and No Further) occupied a large open-pit coal mine in Germany, drawing worldwide attention to ongoing fossil fuel use and closing the mine for several days (Cox, 2019; Swift, 2019). Climate activists in Aotearoa New Zealand have recently blockaded petroleum and mineral forums, a coal train, and occupied a deepsea drilling support vessel (Block, 2019; Todd, 2019a; Nightingale, 2018; Todd, 2019b; Mohanlall, 2019). These direct actions seek to raise awareness of fossil fuel extraction and use, engage in protest to prevent its extraction and distribution, and impair the businesses that profit from fossil fuels. Rather than seeking to create widespread disruption throughout society to bring governments to their knees, direct action against the institutions that benefit from fossil fuels seeks change by disrupting their business. A radical approach using diverse tactics and locations, combined with civil disobedience could have a significant impact upon the climate crisis and awareness of it. By ignoring these alternatives, and justifying a strategy based upon the 3.5% rule, XR are ignoring alternative research-based strategies (eg. Thomas et al., 2019; Bluic et al., 2015; Haines, 1988).

Defenders of XR may respond to my criticism of the misuse of research by XR by arguing that the strategy that XR has adopted is that of a social movement positioning itself as a ‘radical flank’. Radical flank groups operate in a more radical space as part of a broader social movement of multiple groups, often acting as ‘muscle’ to enforce the demands of the more mainstream parts of the movement (Ellefsen, 2018). Radical flanks can have significant influence on processes of social change: creating space for mainstream discourses to be more successful, creating a sense of crisis to force change, increasing funding and support for more moderate groups, increasing government action on moderate demands, and shifting public opinion (Haines, 1984; Haines, 1988; Ellefsen, 2018; Tompkins, 2015). XR is well positioned in the climate change movement to act as a radical flank for more moderate groups such as 350 and the school strikes.

However there is limited evidence of radical flank theory in the cognitive praxis of XR. While XR argues that its radical strategies will shift public discourse and opinions, its strategy is based on the assumption that radical action will lead to the government succumbing to XR’s demands (Hallam, 2019a). Although radical flank theory provides evidence of mainstream groups benefiting from having a radical flank, it does not indicate that the radical flank’s goals will be achieved. If XR is operating as a radical flank for more moderate climate groups, it is not doing so as part of a research-informed cognitive praxis towards social change.

XR and its founders Roger Hallam and Gail Bradbrook have made explicit and implicit references to Chenoweth and Stephan’s research in XR’s web pages and publications, as well as media opinion pieces and interviews. My analysis of these documents demonstrates how *Why Civil Resistance Works* is being used

to justify a repertoire of contention based on mass mobilisation and civil disobedience that is informed by a cognitive praxis that argues for mobilising 3.5% of a population to resolve the climate crisis. However, Chenoweth and Stephan's research is being misused, applying it to a context to which the data does not apply. This has led to XR adopting a repertoire of mass civil disobedience that may be less effective than alternatives, such as lobbying elites, campaigning for emergency declarations, student strikes, and direct action against fossil fuel extraction, distribution and use.

## Conclusion

In this article I have argued that the misuse of academic research by XR has shaped its strategies in ways that may be unhelpful to achieving change. In pursuit of this argument, I have explored research by Chenoweth and Stephan that argues that once a campaign mobilises 3.5% of a population that it will always be successful. While I recognise the significance of this research, I argue that a close examination of the dataset that it is drawn from, key sections of the text, and the statements of one of the authors, limits the possible contexts this research can be applied to. It is therefore impossible to draw any conclusions as to whether the 3.5% rule is relevant to XR's campaigns seeking reform in Western liberal democracies.

There is a wealth of research on social movements, their production and use of knowledge, and the interaction between social movements and the academics that research them (see for example Choudry, 2014a; Choudry, 2014b; Choudry and Kapoor, 2010; Cox and Fominaya, 2009; Cox, 2014; Cox, 2015). However, there is limited research seeking to understand how groups use or misuse social movement research when designing their strategies. In the absence of this literature I have situated this discussion in the literature of knowledge diffusion, particularly the diffusion of a cognitive praxis that informs activists of the strategies and tactics that are likely to be successful in seeking social change (Soule, 2007; Soule, 1997; Soule and Roggeband, 2018). I have argued that the complex nature of climate change activism and the urgency of the climate crisis has encouraged XR to adopt and diffuse the 3.5% rule as applicable to the Western liberal democratic context, providing hope of successful social change. The adoption of this cognitive praxis has seen XR pursue a strategy of mass disruption in capital cities and reject alternative strategies, yet this strategy is based on the misuse of research.

This is not entirely a negative story however. There is a nascent trend of social movements actively engaging with social movement research that social movement researchers should actively embrace. Historically, activists have often disengaged with social movement research because of its theoretical abstraction and lack of practical application, and their suspicion about the nature of the neoliberal university and the motivations of academics (Came et al., 2015; Bevington and Dixon, 2005; Meyer, 2005). Perhaps more than any other movement in history, climate change organisations and the activists

within them are engaged with and informed by scientific knowledge. This is particularly the case for XR which not only uses scientific knowledge to make claims, but uses social scientific knowledge to construct a cognitive praxis which informs its internal dynamics and strategies, including the 3.5% rule. The example of XR should therefore be encouraging for researchers working with and on social movements that their work has meaning to the subjects of that research.

Amongst this enthusiasm, we need to remain wary about the limitations of knowledge, its wider applicability, and reflect on how it is used by social movements (Tseng, 2012; Orsini and Smith, 2010). The solution to these issues is more, not less, engagement with social movements, in order to apply both academic and activist knowledge to the development of an informed cognitive praxis and effective repertoire of contention. This cognitive praxis and repertoire will be informed by the diffusion of ideas from other contexts, but should not be uncritically driven by them. I therefore echo calls for researchers to engage with social movements, recognise knowledge created within movements as valuable, and produce academic research relevant to the work of social change (Choudry, 2014a; Choudry, 2014b; Choudry and Kapoor, 2010; Cox and Fominaya, 2009; Cox, 2014). This work is inherently political, and requires academics to consider the purpose of their work, the limited value of knowledge that only circulates in the academic world, and how academia can contribute to the work of social change (Cox, 2015). It will require a close engagement with social movements to find answers to the questions that social movements raise. Some obvious ones raised by this research and XR's use of the 3.5% rule is how mass mobilisation affects the success of campaigns in liberal democratic states, whether the 3.5% rule or something similar applies, and what alternative strategies should social movements employ if there is no number that can be mobilised for guaranteed success? Erica Chenoweth has begun this work by creating a new database, NAVCO 3.0, which reports over 100,000 daily resistance events in 26 countries from 1990-2011 (NAVCO Data Project, 2019). This dataset, when analysed, may offer more useful knowledge to inform the cognitive praxis and strategies of XR.

A greater understanding of how social movements interpret and operationalise social movement research has the potential to further transform the relationship between academics and social movements. Knowing how social movements use research encourages academics to focus their work on topics that support activism. This in turn should help social movements engage with relevant research and use it to inform their work. However this interaction requires an honest assessment of the limitations of the applicability of research and frank assessments when research is being misused. Only then can research be successfully operationalised by social movements engaged in the work of social change. This work will reach beyond academic circles to impact upon social movements, their campaigns, and significant social and political issues such as the climate crisis and our responses to it.

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## About the Author

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