MASTER THESIS

Examining the gears of climate change scepticism

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Ben Cooke

Supervisor: Enrique Hernández

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ABSTRACT

The literature is concentrated in studying some aspects of anthropogenic climate change skepticism, in some regions, but is sporadic in most facets and geographies. This study attempts to partially address that gap by developing a quantitative model to discern the effect of neoliberalism as a socio-economic system, and governance as a harbinger for psychological attitudes, on climate change denial. The empirical results, using a sample of 21 European countries, reveal that greater economic freedom has undercut environmental measures to address climate change, and that effective and stable governmental practices have allowed their respective constituencies the psychological space to more fully confront the issue. Interactive effects on ideology, however, have been seen to be less conclusive.

Keywords: neoliberalism, capitalism, anthropogenic climate change, climate change scepticism, government stability, psychology, sociology.

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1.0 Introduction

1.1 Background

Climate change is today seen as arguably the most fundamental threat to the planet as constituted, and certainly the primary environmental issue (Norgaard, 2011). Global warming is now considered indisputable, placing pressure on natural systems and economic ones (Stern, 2006; IPCC, 2013). "Climate change will likely jeopardize state economic resources, exacerbate social inequality, alter community structures, and generate new patterns of economic and social conflict" (Norgaard, 2011: 399). Studies have found that between 97-98% of climate change researchers support the notion that this change is primarily spurred by anthropogenic actions as per the Intergovernmental Panel on Climate Change's (IPCC) findings, and that temperatures are to continue rising in the absence of any retaliatory measure to 'dangerous' levels (Anderegg et al., 2010; Poortinga et al., 2010) of emissions. Furthermore, of those that remain unconvinced by the overwhelming science, studies have concluded that their relative expertise and scientific prominence is much less esteemed (Doran & Zimmerman, 2009).

Given these facts we find that, despite the complexity of the science and the legitimate concerns of the exact nature of climate systems, policy regarding the mitigation and adaptation of and to climate change has become a major directive worldover. From the late 1980's, when the issue first came into salience, to present day, climate change has been on the agenda of the majority of multi-lateral intergovernmental summits and has, despite large failures and seemingly intractable levels of stagnancy, produced the Kyoto Protocol, the Copenhagen Accord and the Paris Agreement, that latter of which boasts 176 national signatories. This most recent show of unity was largely driven in place by the leadership of the European bloc, which pre-empted the agreement by presenting the ambitious '2030 Framework', which called for 40% reductions in emissions below 1990 levels by the eponymous year. The multi-lateral and multi-level nature of European governance has placed it in a unique position to dictate policy (de Cendra, 2010, Jordan et al., 2012), and is why the following study revolves primarily around its member states.

However, despite this flurry of activity, and a rise in public concern in general, the phenomenon of climate change denial and scepticism remains rife, with few signs of abatement (Norgaard, 2011). Widespread dissemination of ideas contrary to the science, most notably that climate change doesn't exist or, if it does, that it is not athropogenic in nature, is prevalent. This is promlematic; ambitious targets require fundamental shifts in the way that energy is used and produced and can only be met with sustained and widespread public support (Brulle, 2011). Decarbonisation will not only require new technologies and facilities, but these new supply side measures will drastically affect lifestyle parameters. Individuals and communities will have to change their behaviours in ways that will seem unrecognisable to them now (Steg & Viek, 2009), and which will act to upset the psychological balance people employ in their everyday lives (Norgaard, 2016). The policy decisions that ensue will stem from this support, and these future legislative responses will concern themselves with what is known as the 'energy trilemma', which describes a balance between energy security, social impact and environmental sensitivity. These in themselves lie in conflict with one another as it pertains to energy production (Biesboek et al., 2010).

This theoretical conflict has led to competing actors vying for the stage to promote their own interests and mould public opinion away from the solidity of the science, a scenario most clearly seen within the United States, and one which therefore has been accorded primacy in previous academic scholarship. Seminal works at the turn of the current decade, most notably by McCright & Dunlap (2010; 2011; 2013; 2014), pinpointed that the phenomenon was largely the result of increasing levels of partisanship. "While not the sole driver, anthropogenic climate change (ACC) denial activism by the conservative movement, Republican politicians, and the fossil fuels industry has been effective in generating within the American public the perception that scientists do not agree about ACC, and this perception influences (both directly and indirectly) support for government action on ACC. (2013: 199). Uscinski & Olivella (2017) concur, finding that party elites were largely to blame for the mirage.

Indeed, as Mann (2014) suggests, climate change was 'unlucky' as an issue. Before laymen were confronted with it in the early 80's, legislation such as the 1970 Clean Air Act passed 374-1 in the House and 73-0 in the Senate. However, that critical decade in between saw

environmental attitudes become ideological markers. For instance, the issue of acid rain was decried by those on the left and both the Republican administration and the Democratic Congress acted to combat it. Yet, common consensus today is that the issue was overwrought, and rather than being relieved that such problems were eradicable or at least manageable, it began a process of recriminations between the two sides that has only since widened. Environmental concerns became a proxy by which wider ideological battles were fought. "As symbols, the issues couldn't be compromised. Standing up for your side telegraphed your commitment to take back America—either from tyrannical liberal elitism or right-wing greed and fecklessness".

It is this right side which actively seeks to undermine public trust in climate science, an entity labelled as a "denial machine" and comprising of industrial, political and media actors which make up the conservative ideology leadership (Dunlap, 2014). It was with the 1989 fall of communism and the environmental movement's international efforts at the 1992 Rio Earth Summit that the attention of U.S. conservative think tanks, which had been organised in the 1970's as an intellectual counter-movement to socialism, turned from the "red scare" to the "green scare" which they saw as a threat to their aims of private property, free trade market economies and global capitalism (Jacques et al., 2008). Thus denialism became an arm of the neoliberalism that was espoused, generated, and proliferated in the era of Thatcher and Reagan as a response to the crises of the 1970s' Great Society regime, and which was consolidated as hegemony during the Clinton presidency (Brulle, 2011). This scepticism fed off the already prevailing polarization within the major issues that dominated the American landscape: financial ruptures, economic inequality, unemployment, and so forth. Brulle (2011: 200) recognized that it was going to be difficult "to mobilize people for climate change mitigation unless it (was) done in concert with efforts to engage these other pressing problems, which also have been generated or at least exacerbated by neoliberal globalization". It suggested, therefore, that the stability of a socio-economic system, as mediated by the government, would therefore be paramount in laying the foundation for a sort of buffer which would allow drastic action on climate change to take place.

1.2 Direction of Research

While the United States has been analysed extensively due to its leading role in the politicisation of climate change science, a question arises as to whether the polarisation regarding climate change denial in ideology that is found in the U.S. is also manifestly observable in Europe, albeit at a less pronounced scale. Research suggests that in comparison to the developing world scepticism has increased in Western countries in the last decade after a momentary downturn, largely on account of the financial crisis of 2008 (Eurobarometer, 2009; Leiserowitz et al., 2010, Capstick, 2015). Indeed, a more nuanced look at ideology's effect on scepticism will perhaps offer more precise methods by which we one might look to further engage the public with the concerns of ACC. In general, Europe has seen less analysis in the climate change denial realm simply because the studies have consistently shown less disparity between different groups within the bloc and their beliefs on the matter (see Figure 1, below). This study not only seeks to ascertain the link between neoliberalism as a governmental objective and climate change scepticism, but also to ask whether countries with more stringently employed neoliberal practices have diffused their inherent anti-environmental stance onto its constituency ideologically, on an individual level. Does the constituency do little save follow the lead of its state elite, or is it such that the populace is guilty of the same bias that their governments have installed to create the current paradigm? Ignorance or wilful ignorance? It seeks to offer a snapshot of the state of Europe given its various socio-political positions and, given this paper is not a temporal study on account of this being based on the first survey of its kind, it positions itself to allow further studies aimed at understanding whether a given populace become further indoctrinated over time as the short term benefits of neoliberalism solidify.

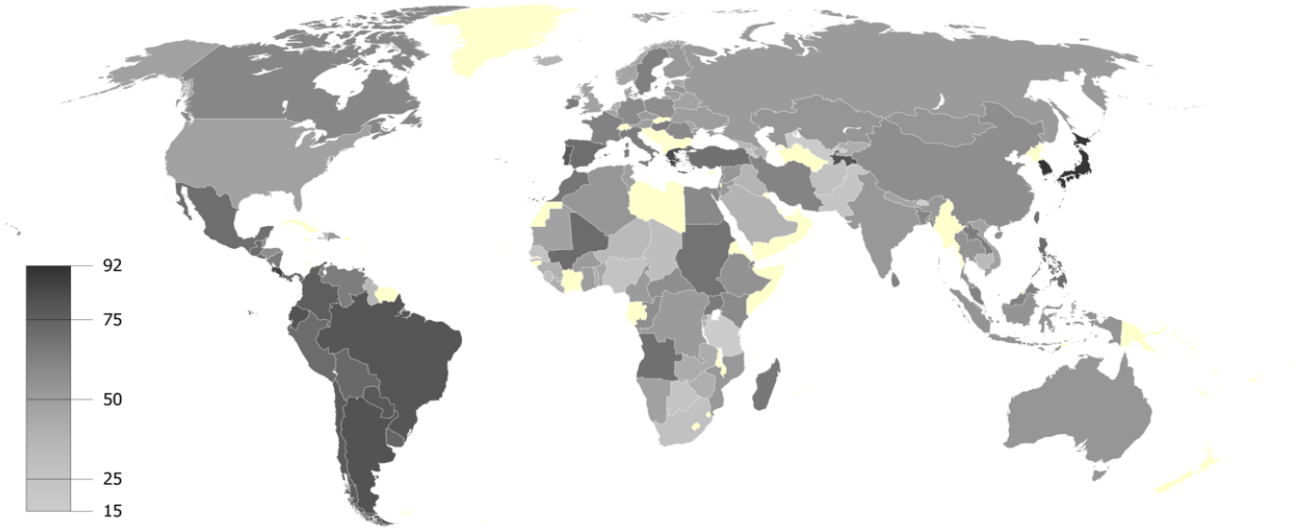
This paper will discuss the implications of ideology, neoliberalism, governmental stability and the core tenets of human psychology on the phenomenon of climate change denial. A theoretical framework will be drawn to encapsulate the above issues, in which five hypotheses will be presented. Our variables, alongside the data to measure them, will then be introduced and a quantitative methodology discussed, before the results of both a multi-level regression and a qualitative analysis will be presented in order to sythesise fully with the theoretical framework. Finally we will discuss the results, limitations of the method and avenues for further research.

2.0 Theoretical Framework

2.1 Synopsis

Extrapolating further from the findings of McCright & Dunlap (2013), or of Poortinga et al. (2010), individual rather than aggregate level observances yielded that "climate scepticism appeared particularly common among older individuals from lower socio-economic backgrounds who are politically conservative and hold traditional values; while less common among younger individuals from higher socioeconomic backgrounds who hold self-transcendence and environmental values. The finding that climate scepticism is rooted in people's core values and worldviews may imply coherent and encompassing sceptical outlook on climate change". There is a clear cross-section here between ideology and the economic system that has come to prevalence through that ideology: neoliberalism. The effects of each on anthropogenic climate change scepticism are intertwined. Indeed, at this juncture, we must define the meaning of anthropogenic climate change (ACC). Lenton et al. (2008), a differentiation is made between two forms. The first meaning is future oriented, summarised by the notion that anthropogenic emissions will lead to global warming, while the second is past oriented, suggesting that human activities have conspicuously changed the global climate. Both statements are heavily supported by the evidence, though the first is not conditional on the second. In this paper we shall lean most heavily on the second definition, so as to correspond with the question asked in Figure 1, below.

Figure 1: Survey response to: "Temperature rise is part of global warming or climate change. Do you think rising temperatures are rising as a result of human activities?" Source: Pelham, B. (2009). Awareness, Opinions About Global Warming Vary Worldwide. Gallup.



In the Rahmstorf typology of 2004, a further categorisation is made to classify the brand of scepticism in the individuals themselves. There are three: trend sceptics, who deny change, attribution sceptics, who deny blame on the part of humans, and impact sceptics, who deny the change will be disastrous. Though Rahmstorf makes certain that there is a high level of correlation between the three, given the paragraph prior we can clearly assign attribution scepticism to this study. Yet we should remain wary as to the source of this sort of scepticism; as Klein (2014) makes clear, oftentimes the right-wing elite understand the science better than the left, and certainly those in the centre, in order to argue against it and further their agenda. On an individual level, however, we will finally also seek to ascertain the psychological configurations inherent in humanity that magnify the ideology that exists apart of and inherent in the said psychology. Poortinga et al. (2011) confirms that climate scepticism is founded upon people's core values and worldviews, yet too often we resort to ascribing ideology upon this definition, without understanding that the humanity comes before the ideology. As Norgaard (2011: 400) suggests, "people actually work to avoid acknowledging disturbing information in order to avoid emotions of fear, guilt, and helplessness, follow cultural norms, and maintain positive conceptions of individual and national identity". This lies before the approach of political polarisation, and as such will also figure into our understanding of how climate change scepticism manifests itself.

2.2 Ideology and Neoliberalism;

In Parr's 2013 discourse, 'The Wrath of Capital: Neoliberalism and Climate Change Politics", the author damningly declares that "although climate change has become the dominant concern of the twenty-first century, global powers refuse to implement the changes necessary to reverse these trends. Instead, they have neoliberalised (sic) nature and climate change politics and discourse, and there are indications of a more virulent strain of capital accumulation on the horizon". This was laid on the back of the century before, where two policy regimes competed in the hegemonic western world (Brulle, 2011). On the one hand lay market liberalism, stressing unfettered capitalism, strong property rights, and a minimal social safety net, while on the other, social liberalism, favouring modest state intervention, redistribution, and welfare provision. Particularly in the case of the United States, capitalist ownership or management was only cosmetically challenged, and as such "anti-environmentalism has been, from the start, a keystone of neoliberal anti-regulatory politics" (2013: 197).

Klein (2014) has described the state of affairs as having evolved into a scenario whereby capitalist globalization and climate change science lie at opposite poles, unable to gain sight of one another and oblivious to the interdependency between environment and economy. Emboldened by both victory in the Cold War and the barren landscape cleared by the policies of Reagan and Thatcher the decade prior, neoliberalism has now taken pole position and is handily winning the war between the two (McCright & Dunlap, 2011). This is to say that by its nature, "neoliberal capitalism categorically rejects the policy instruments, governance structures and cultural values which are essential to tackle the problem" (Klein, 2014: 136). As such, the end portended is ominous; either we stay the course and allow the shifting dynamics of the climate to completely reconfigure our world, or we upend our economic system in its entirety to avoid the fate. In itself, this raises some interesting questions that will be addressed more fully in the section 2.2. In the interim though, we can surmise a reasonable assumption that in order for the levers to turn towards our current paradigm, as a species we must have become ensconced, unwittingly or not, in neoliberalism and consequently by the implications it holds.

Klein continues by suggesting that further to the contradiction in economic terms, the reason why we fail to fully contend with climate change and its impacts are because of the foundations upon which the Western world stands, an explanation which has as an adjunct the system of neoliberalism. The overriding sense that we can outsmart nature, coupled with the consumerist society we have become enamoured with, alongside the notion that in order to confront it, we would need to signal the death of the most powerful industry the world has ever known in oil and gas, culminates in the notion that we "are locked in—politically, physically, and culturally" (2014: 63). Even supranationally, patriotism pits one country against another rather than creating an environment where cooperation is key. Rich countries dig in their heels and declare that they won't cut emissions and risk losing their vaulted position in the global hierarchy; poorer countries declare that they won't give up their right to pollute as much as rich countries did on their way to wealth, even if that means deepening a disaster that hurts the poor most of all (Parr, 2013). This dovetails perfectly with the conservative mindset which allows inequality to run rampant.

In all manner of things, it becomes apparent that neoliberalism is the barrier by which climate change adaptation cannot pass. And it is no wonder. Pundits as esteemed as the former chairman of the IPCC, Rajendra Pachuari, have argued (Schipper, 2007) that climate change is reversible by utilising green technologies and making obsolete dirty industries, giving rise to new wealth production. In effect, they seek to defeat the forces of free market capitalism by using them in the solution, not comprehending the notion that climate change and environmental dilapidation are, at their nexus, issues of equality (Parr, 2013). Creating technologies that will be owned and patented only serves to bolster the system which led us to the impasse we find ourselves in presently. The green free market favours the current system of privatisation at the expense of exploring new economic alternatives; for this reason, it is mere cronyism. Neoliberalism has bastardised the fundamentals of liberalism to which such an effort might be directed. "In the name of celebrating individual responsibility and choice, neoliberal policies have resulted in cutbacks on government spending, mass privatization, trickle-down economics, deregulation, open competition, and the gradual deterioration of the commons" (Bailey, 2007). As eloquently summarised by Amory Lovins (2008), "markets make very good servants, but they're not good masters, and they're a lousy religion".

At this juncture we can formulate our first hypothesis;

H1(a): In more neoliberal societies we observe increasing levels of climate change scepticism among individuals.

This brings us to a more nuanced study of the effects of ideology at the individual level, as it relates to neoliberalism. As we have seen prior, the tenets of neoliberalism have been observed to be in direct conflict with the facts established in climate change science. Neoliberals attack the idea of public goods and oppose regulation, taxation, and other state policies which do not serve the short-term corporate bottom line and investor accumulations (Brulle, 2011). This is synonymous with the conservative right, whom studies have found to equate democracy with "economic freedom" or "free enterprise"—property rights, contracts, and consumer choice (Rossen, 2015: 43). The result is that, in the United States, 75% of Democrats believe that climate change is anthropogenic, while among Republicans that number plummets to 20%. It manifests itself in the real world rather blatantly. Even the EU's Emissions Trading Scheme, a policy seen as the bastion of climate change mitigation, has seen business leaders looking to turn a profit by taking advantage of this neoliberal framework (Bailey, 2007).

Their moral imperatives (detailed in 2.2) again stipulate that no harm should come to this state of affairs; neoliberalism ensures the further segregation of wealth in a way which will benefit them, financially at least. "The core of the problem comes back to the same inescapable fact that has both blocked climate action and accelerated emissions: all of us are living in the world that neoliberalism built, even if we happen to be critics of neoliberalism" (Klein, 2014: 138). Seen in this light, climate change scepticism is derived from the perception that the legislative policies designed to mitigate climate change have regulatory implications, counter to the tenets of a free market ideology in which unfettered markets are seen to provide the best social and economic outcomes for society. Oreskes & Conway (2010) corroborate this, detailing how climate change denial has been deliberately orchestrated by a small but vocal group of laissez-faire, free marketeers. Furthermore, empirical evidence (Lewandowsky et al., 2013) shows that a neoliberal ideology strongly

correlates to a rejection of reality as it pertains to climate change, accounting for up to 80% of the variance in climate change denial. Again we see that conservatives, the defenders of neoliberalism, continue to wholeheartedly deny the facts offered up by the science because climate change "detonates the ideological scaffolding on which contemporary conservatism rests" (Klein, 2014). As such we find ourselves with the second hypothesis:

H1(b): Conservative ideology is a clear indicator towards climate change scepticism.

They are simultaneously offered ample support by the neoconservative base as well as the evangelical Christian bloc, who traditionally support an aggressive foreign policy and a cultural conservatism. Preservation of the status quo is the key. These faults of the current paradigm we find ourselves in lie also at the feet of the sustainability movement, who seem unable to grasp that the economic and cultural implications of their proposed remedies will be too severe to swallow (Parr, 2013). As such it permits the economic hegemony to define and dictate the trajectory of the climate change conversation. To her, neoliberalism is defined, aptly, as an "exclusive system premised upon the logic of property rights and the expansion of these rights, all the while maintaining that the free market is self-regulating, sufficiently and efficiently working to establish individual and collective well-being" (2013: 5). The left must therefore come up with a counterpoint which is equally if not more self-regulating; sustainability has to be sustainable. Gunster's (2016; 136) determination that change must come from a groundswell of "diverse and rapidly emerging set of place-based social movements fighting for social justice, self-determination, equality and democracy" rather than the elites is true, but overly simplistic. Until a viable ecosystem sprouts from the ideology left of centre, neoliberals will keep on singing the same song, aware of its efficacy thus far. Indeed, having now been spurred into action by the perceived threats posed by climate change discourse, the conservative machine has gone into overdrive in order to achieve a bias manifest in the proletariat and so extend their winnings (Klein, 2014).

The media was central to this operationalizing movement. Hmielowski (2013) notes that conservative media use corresponded to a decreasing trust in climate change science, while non-conservative media intake showed the opposite effect. This media was deployed by 91 'climate change counter-movements' (CCCM's) observed between the years of 2003 and

2010 (Brulle, 2013) which had an average of USD$964 million in combined budget in order to disseminate what was effectively false and misleading information, money which was donated overwhelmingly by conservative foundations. One such indicative example as per Klein (2014), who undertook a sweep of conservative positions in media outlets, was of conservative columnist and climate change denier George Will, who "argued that the fanatical 'green left's' charges that CO2 emissions and fossil fuel industries pose a 'planetary menace' provide a rationale for the government to 'intrude' everywhere, curtail consumer choice and property rights, and increase the state's size and surveillance". The effect was twofold. After the ensuing blowback from the liberal left, the conservative media counter-attacked by complaining about unfair bias in the mainstream media. Seeking correction, or editorial balance, the mainstream media endeavoured to grant parity to the positions of the CCCM's (Boykoff, 2008). The public, ensconced in the insecurities of a ceaseless war and financial hardship, proved receptive to the fear mongering concerning overall liberty.

It becomes apparent, in this light, that denial is not necessarily indicative of a lower state of knowledge, but rather as a consequence of "an acute perception of the profound economic and political consequences of climate change" (Gunster, 2016). Increased scepticism has been found in the past to be primarily associated with socio-economic factors outside of education; higher age & wealth, privileged location & lifestyle, a male designation, and most predominately, conservative political and environmental views (Whitmarsh, 2010; Klein, 2014; McCright & Dunlap, 2011, Braman et al., 2012). The modern life has been both created and insulated by industrial capitalism, and the conservative defenders of this neoliberalism intervene to ensure the people keep the faith by taking the only avenue available to them: "by claiming that thousands upon thousands of scientists are lying and that climate change is an elaborate hoax… They deny reality, in other words, because the implications of that reality are, quite simply, unthinkable" (Klein, 2014: 38). Indeed, if we take a look at climate change intervention as a microcosm of the ideology of the left we see the truth of Klein's retelling of a 2008 quote made by a rather lucid president of a conservative think tank, Joseph Bast: "Climate change is the perfect thing.… It's the reason why we should do everything [the left] wanted to do anyway." Ideology, specifically that of the right, has swung neoliberalism to work in its favour, and the maintenance of the socio-

economic system is paramount to ensuring the ledger remains heavier on that right hand side.

While this has been shown in America in particular, no studies have established the trend within Europe; this highlights the second, linked hypothesis;

H1(c): Neoliberalism accentuates the effect of right leaning ideology in predicting climate change scepticism in Europe.

Looking at this from an even wider macro perspective, the stakes become menacing. There is a heavily imbued sense of fear, and potential guilt, that the free market system has triggered a series of outcomes that without regulation would indeed threaten huge swathes of humanity (Parr, 2013, Klein, 2014). If this were to be proved correct, then the moral pretence with which they fought so hard for capitalism comes up hollow. So the thinking goes, as soon as they admit that climate change is real, they will lose the central ideological battle of our time. Yet in the interests of intellectual honesty, we should note that leftists are not impervious to this most human of traits either. Confirmation bias is a human affliction, and so "if conservatives are inherent system justifiers, and therefore bridle before facts that call the dominant economic system into question, then most leftists are inherent system questioners, and therefore prone to scepticism about facts that come from corporations and government" (Klein, 2014: 32). This understanding will be factored into the conclusions drawn at the end of this paper. In any case, as it pertains to the politics of climate change, we can see that far from a simple disagreement with the facts as espoused by the scientific community, anthropogenic climate change scepticism remains the province of ideology and the socio-economic drivers behind it more than any other single factor.

2.3 Psychology in and of Stability;

As previously stated, past research has often centred on demographics, lifestyle, knowledge, values and ideology, with a particular emphasis on the latter. (Whitmarsh, 2010; Klein, 2014; McCright & Dunlap, 2011, Braman et al., 2012). Yet according to Norgaard (2006) and Gifford (2011), this analysis seems to miss the inherent, base level instincts that drive

humanity. While all scepticism is of course psychological, a distinction has to be made been endogenous and exogenous drivers. Here, in contrast to the section prior, we look at the former, and how they relate to the construct that is built around them by external forces. For if we simply look at ideology as the foundation stone of any analysis of climate change scepticism, we might be tempted into assuming the unsupported claim that people have stopped caring about the environment, the poor, or future generations. If we did not dig deeper, it would seem irrational to suggest otherwise in explaining our collective passivity (Norgaard, 2011).

Norgaard undertakes an ethnographic approach in order to root out the base cause; she conducted 46 interviews and attempted to categorise the 'strategies of denial' which, broadly speaking, were either interpretive or cultural. All interviewees were within one community in the rural west of Norway, and while this clearly makes the subject of external validity problematic, it did reveal a trend towards cognitive dissonance predicted by several studies prior (Stoll-Kleeman et al., 2001; Lorenzoni et al., 2007); Norgaard recorded both awareness and concern over the issue in her sample, but also the sense that it was an issue that tended to stick in the throat. It was synonymous with what the British sociologist Stanley Cohen referred to as 'implicatory denial', whereby knowledge about a war in a region far flung from your own, and the women raped and children starved therein, are given short shrift because they are "not seen as psychologically disturbing or as carrying amoral imperative to act… Unlike literal or interpretive denial, knowledge itself is not at issue, but doing the 'right' thing with the knowledge" (Cohen, 2001: 9). Humanity requires these delineations because without them, stability in the human mind would be compromised.

Applying this to the aforementioned climate sceptic campaigns, we can see that they have an inherent handicap advantage over those that would promote action: "people actually work to avoid acknowledging disturbing information in order to avoid emotions of fear, guilt, and helplessness, follow cultural norms, and maintain positive conceptions of individual and national identity. As a result of this kind of denial, people describe a sense of 'knowing and not knowing' about climate change, of having information but not thinking about it in their everyday lives" (Norgaard, 2011: 404). Poortinga et. al. (2010: 20) refers to

a “finite pool of worry”. This apparent cowardice, or wilful ignorance, though, reminds us that to disregard an issue of such monstrous import could be as difficult as attempting to solve it; to curtail feelings of empathy as to extend them, or to temper one’s emotions by exerting control one’s thoughts (Rosenberg, 1991; Hochschild, 1983). Our paralysis in that case is not a reflection of our greed or inhumanity, but rather because the issue is morbid, which is in fact an echo of our charity. In any case, it becomes clear that just because individuals indicate that they do not personally worry about the impacts of climate change it does not necessarily mean they think that there is nothing to worry about (Carolan, 2010).

In Norway’s case, Norgaard (2011) identified certain cultural norms which rendered it improper to express emotions that they held privately, despite other cultural norms of egalitarianism and environmental consciousness. This produced the net negative effect of sweeping everything under the proverbial rug. Looking even more intently at the situation, one must ask why such cultural norms existed; the author contends that socially organised denial in a country of Norway’s affluence holds a relationship with studies of privilege. This is where the psychology intercepts with the concepts of neoliberalism mentioned earlier. “Ongoing changes in social organization, especially the twin forces of globalization and increasing inequality creates a situation in which, for privileged people, environmental and social justice problems are increasingly distant in time or space or both. Social inequality helps to perpetuate environmental degradation making it easier to displace visible outcomes and costs across borders of time and space, out of the way of those citizens with the potential time, energy, cultural capital, and political clout to generate moral outrage and take action in a variety of ways” (2011; 410)**.** Nations significantly less fortunate than Norway will be impacted by climate change much sooner, and as such a contradiction-in-terms ensues whereby, on a relative scale, the issue becomes less of a concern to those who have the means to reckon with it. And as global capitalism ensures that, within the economic paradigm we currently occupy, wealth segregation will continue to grow, not only will the issue remain unresolved, it will get significantly direr in light of affluent countries moving to barricade themselves from the insecurity that pervades in the developing world. Stability can propel you into problem solving, but it can also insulate you from future harm.

In review: Given the exhibited, explicit desire of humanity for comfort, to ease insecurity or

uncertainty, it would therefore follow that nations which allowed their constituents a margin of error in lieu of a smoothly running, stable governmental machine would also allow them the space to contemplate climate change in all its implications without the same commensurate level of fear as in other nations where the burden of survival is already high. That is to say, beneficial cultural habits can be formed through strong, positive leadership with long term targets which aid in the climate change issue. Of course, it is prudent to recognise that stability might generate competing interests. The paradigm outlined above could be turned on its head; namely, if a government is more stable, it has more of a buffer zone to itself change the status quo. Yet one could also conclude that the populace underneath them, assuming the consideration of an affluent Western nation, will generally be less inclined to upset their own privileged balance. A paradox ensues. We must turn therefore to an interaction between ideology and government stability, which produces the final two hypotheses:

H2(a): In societies with strong, stable and effective governance we observe decreasing levels of climate change scepticism among individuals.

H2(b): Stable and effective governance offers a socio-economic buffer which accentuates the ideology of its constituency in predicting the level of climate change scepticism.

This bears hallmarks with the system justification and social dominance orientation (SDO) theories as espoused by scholars such as Jost & Hunyady (2005) and Feygina et al. (2009) in the case of the former, and Jylha & Akrami (2015) in the case of the latter. According to system justification theory, our appraisals of our social and institutional are balanced by epistemic needs to maintain a sense of certainty and stability, existential needs to feel secure and supported, and interpersonal needs to interact with those in the same broad position (Ledgerwood & Hardin, 2008). Combined, these needs motivate the individual to perceive the system as fair, legitimate, beneficial, and stable, as well as the desire to maintain and protect the status quo (Jost, Liviatan, et al., 2009). In the short term this can be desirable, as it can assuage anxiety, uncertainty and fear, but the long-term implications of pursuing the system justification goal can be negative, where it interferes with forming intentions or taking action to correct injustices or system-level problems (Wakslak et al.,

2007). Consistent with self-interest, those who are advantaged by the system typically engage in system justification more enthusiastically than those who are disadvantaged, and as such, in line with the previous paragraph, it indicates a major obstacle in accomplishing positive environmental change. This is to say, the more people are motivated to defend and bolster the existing system, the more likely they will be to deny environmental problems, insofar as these challenge the system's legitimacy as well as its stability (Feygina et al., 2009).

SDO, in contrast, is conceptualized as a measure of an individual's preference for hierarchy within any social system and the domination over lower-status groups. In a study of Kahan et al. (2012), it was found that "people with strong 'egalitarian' and 'communitarian' worldviews (marked by an inclination toward collective action and social justice, concern about inequality, and suspicion of corporate power) overwhelmingly accept the scientific consensus on climate change. Conversely, those with strong "hierarchical" and "individualistic" worldviews (marked by opposition to government assistance for the poor and minorities, strong support for industry, and a belief that we all pretty much get what we deserve) overwhelmingly reject the scientific consensus". In essence, it reinforces what we have determined previously, in that people find it cognitively distressing to realise that what they consider as noble is damaging, and that what they consider as base was virtuous. Under this pretext, climate change mitigation efforts could be more successful if framed as being clearly beneficial for everybody and non-threatening to the existing social order.

As a final appeal to psychology, I turn now to that most opaque of fields, morality. In moral foundation theory the exact nature of a utopic society is politically debated in light of five core moral domains (Haidt & Graham, 2007). In these matter, there is a digression between adherents to the left, whom identify the "individualising foundations" – harm and fairness – and those who adhere to right, who support a further three base measures which are important in community building – in-group loyalty (e.g. patriotism), authority (i.e. hierarchy and obedience), and purity (i.e. transcendence of base nature). As Klein (2014: 44) continues, "It has recently been proposed that the differences in moral considerations may be at the heart of the observed political divisions about climate change. The effects of climate change quite naturally speak to the moral concerns of harm avoidance and fairness

(e.g. climate change will harm the most vulnerable in the world first), but not necessarily to morality focussed on in-group loyalty, deference to authority and personal restraint". At this juncture, the prospect of a sixth foundation comes into play, which brings us full circle. This is the concept of the right to economic liberty, unrestrained from the egalitarian impositions that the contemporary liberals would burden conservatives with under different guises of 'fairness'. From this perspective, government intervention and wealth redistribution are potential moral violations, seen as unjust because they presume that people have a moral obligation to the welfare of others (Iyer et al., 2012). And although this would make a case for neoliberalism, which we evaluate as undermining equality – insofar as climate change is about equality, as suggested earlier – this rumination bears out the immediate hypothesis above, in the rather obvious conclusion that it is imperative for a degree of ideological consensus in order for any stability in governance to be reached.

3.0 Data & Methods

The methodology chosen for the analysis of the three hypotheses outlined in the theoretical framework is a quantitative analysis. The empirical data extracted combines multi-level data on both the individual and country tiers. In the case of the former, I drew on data encapsulated within the second release of the eighth round of the European Social Survey, which gauged the responses of over 33,000 participants across 23 countries. Amongst the slew of questions fielded in the survey, and within the 'Public Attitudes to Climate Change' module, I began by identifying my dependent variable. With respect to the question "Do you think that climate change is caused by natural processes, human activity, or both?", respondents could give an answer ranging from (1) "Entirely caused by natural processes" to (5) "Entirely caused by human processes". There were a further five options indicating 'Refusal', 'Don't Know', 'No Answer', 'Not Applicable', and 'I don't think climate change is happening' which, like similar responses in the individual level independent variables chosen (expanded upon below), were removed from the analysis so as to not sway the sample pool, leaving me with a scale of 1-5, with a higher score indicating less of a degree of anthropogenic climate change (ACC) scepticism.

Individual level control variables, as per the theoretical framework, centred on age, education (number of years in education), ideology (scale 0-10, left to right), and net household income (measured in deciles). Health as determined by life expectancy was not incorporated given the inclusion of age, nor was race, given the blurred ethnographic lines Europe has would ensure no conclusive conclusions could be reached. Operationalising the aggregate level variables proved to be slightly more difficult. Given the ceiling offered by the ESS, I looked for datasets which could extract information for all 23 countries. The variables to be identified were ones which sought to isolate measures of quality of education, historical performance on climate change issues, perceived capability to combat climate change in the future, neoliberalism, and the stability/strength of governance. The quality of education indicator was garnered from the United Nations Human Development Index, which consists of an education parameter which ranks 188 countries on a scale of 0-1 determined by a combination of literacy and enrolment rates. The literacy component is weighted at two-thirds while the enrolment measure, consisting of a pooled primary,

secondary and tertiary gross enrolment rate, is weighted at one-third. The performance variable was generated by Germanwatch's Climate Change Performance Index, which evaluates 56 countries (with the EU as a whole counted as an additional entity) based on fourteen indicators within the four categories of GHG emissions, renewable energy, energy use and climate policy. Next, I utilise the University of Notre Dame's Global Adaptation Initiative to come to a composite score regarding the capability of a given country to tackle future climate change dilemmas. By factoring a 0-1 readiness score and a 0-1 vulnerability score, the university yields a measure between 0-100 called the ND-GAIN Index.

Our last two aggregate variables, neoliberalism and stability, function not only as control variables but as moderators, in hypothesis 1(c) and 2(b), respectively. The former is quantified by The Index of Economic Freedom, as measured by The Heritage Foundation in consortium with The Wall Street Journal[1], which provides a score of 0-100 based on criterion regarding ten factors including trade, investment, financial, labour, and business freedom. Finally, the measure for stability, the most treacherous of our indicators and the most heavily criticised. Calculated by the World Bank, the Worldwide Governance Indicators seek to capture six key dimensions of governance in over 200 countries: voice & accountability, political stability & lack of violence, government effectiveness, regulatory quality, rule of law, and control of corruption. On a scale of 0 to 5 (higher the better), each of these six measures is evaluated. In order to operationalise a working variable, I have consolidated the six values into a composite for each country by treating each value as being of equal weight; I must stress that this goes beyond the scope of the measurements that the World Bank has taken it upon themselves to do, and as such only magnifies the subjectivity already inherent within their measurements (which is well documented). It was, however, the only such measure found which could even remotely measure the stability or strength of the governments in question.

The countries analysed within the study are as follows: Austria, Belgium, the Czech Republic, Estonia, Finland, France, Germany, Hungary, Iceland, Ireland, Israel, Italy, Lithuania, The

[1] Note that the self-professed motivation for these two institutions to create the index, as per its executive summary, was to promulgate the benefits of economic freedom.

Netherlands, Norway, Poland, Portugal, Russia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom[2].

Having established the variables, it is the purpose of this dissertation to test conclusions to the five hypotheses previously laid out. In the first (H1(a)), we wish to establish a link between aggregate level neoliberalism and individual level anthropogenic climate change scepticism. The second (H1(b)) contends with the relationship predicted between right wing ideology and ACC scepticism, while the fourth (H2(a)) will examine the relationship between government efficacy and stability and ACC scepticsm. The third and fifth hypotheses establish interactive effects which build on the results of the H1(a) & H1(b) for the former, and H1(b) and H2(a) for the latter. One (H1(c)) measures the effect of different levels of neoliberalism on the left-right scale's relationship with ACC scepticism. Similarly, the other (H2(b)) measures the effect of different levels of governmental stability on the left-right scale's relationship with ACC scepticism. We will achieve this by first running a random-intercept multi-level regression model. A straight quantitative analysis will be used to analyse the validity of the first, second and fourth hypotheses, while a graphic representation of the interaction will be used to make conclusions on the third and fifth hypotheses. Through these methods, we will be able to understand the relationships held between ideology, neoliberalism, government stability and raw psychology as it pertains to the 21 countries analysed in Europe.

[2] Two of these countries, Iceland and Israel, were omitted in the Stata analysis in lieu of their not being any data available for the Climate Change Performance Index. This was deemed acceptable as they did not occupy the extremes within any of the other variables.

4.0 Empirical Results

4.1 Correlations;

We first record the correlations between the variables (Table 1)[3], where we can immediately see that no issues regarding levels of correlation between the control variables are too high for use come into play; all variables are independent enough of one another, absent of multi-collinearity concerns. They are all also statistically significant[4]. Regarding each variables relationship to climate change scepticism, we come across no intuitive surprises. Belief in anthropogenic climate change is positively correlated with higher household incomes and with more years of education. Conversely, it is negatively correlated to ideology, left-right scale (where right-wing is accorded a higher number) and older age.

Table 1: Individual Level Variable Correlations

VARIABLES	(1) ccnthum
Climate change skepticism	1
Years of full-time education completed	0.082***
Age of respondent, calculated	-0.118***
Placement on left right scale	-0.095***
Household's total net income, all sources	0.029***

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

[3] Statistics summarising the distribution of the variables are detailed in Appendix 7.1.

[4] Given the nature of multi-level regression, aggregate level correlations are only shown in the appendices (7.2); it is of some interest that the coefficient between 'Neoliberalism' and 'Stability', our two control variables, is quite high at 0.759. Other aggregate-aggregate correlations are also observed to be high.

4.2 OLS Regressions;

In Table 2 we see, again with high levels of statistical significance, that within the individual level variables, the following coefficients/relationships are observed: For every year of education completed, a corresponding increase of 0.014 units of climate change scepticism indicated greater belief in anthropogenic causes. A similar relationships exist for the measure for household income. Conversely, for every unit increase on a scale of 0-10 in ideology, we see a 0.028 unit increase in belief of *natural causes* rather than human. Similarly, for every ten years of age, a 0.043 unit increase in the same is seen[5] [6]. These change effects are not substantial, and will have implications on our findings, which will be discussed below in detail.

Table 2: Individual Level Variable Regression

VARIABLES	(1) Model 1
Years of full-time education completed	0.014***
	(0.001)
Age of respondent, calculated	-0.004***
	($2.1*10^{-4}$)
Placement on left right scale	-0.028***
	(0.002)
Household's total net income, all sources	$3.8*10^{-4}$**
	($1.53*10^{-4}$)
Constant	3.792***
	(0.029)
Country Fixed Effects	✓
Observations	36,447
R-squared	0.055

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

[5] While we see that the R^2 value of of 0.055, which suggests that the independent variables account for 5.5% of variance in climate change skepticism, is minimal, we do not seek to fully explain the variance and beliefs in climate change, but only to establish a relationship between the control variables and climate change scepticism itself.

[6] The annex contains both a correlation (7.2) and a regression (7.3) table for the 'education lever' variables: the individual level 'years of education' completed and the aggregate level 'quality of education'

4.3 Multi-level Regression;

The results of the multi-level regression between the individual level European Social Survey variables, and the aggregate level country variables, is as follows (Table 4):

Table 4: Multi-level Regression;

VARIABLES	(1) Model 1
Individual Level Variables	
Years of full-time education completed	0.01386***
	(0.00114)
Age of respondent, calculated	-0.00434***
	(0.000234)
Placement on left right scale	-0.0257***
	(0.00192)
Household's total net income, all sources	0.000433***
	(0.000159)
Aggregate Level Variables	
Neoliberalism	-0.01077*
	(0.00608)
Quality of Education	-2.155***
	(0.762)
Government Stability & Efficacy	0.251***
	(0.0762)
Climate Change Performance	-0.00234
	(0.00241)
Readiness for Climate Change	-0.00347
	(0.0071)
Constant	5.632***[7]
	(0.485)
Observations	33,741
Number of groups	21[8]

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

[7] This intercept designation is effectively meaningless, as no situation can arise where all independent variables can be 0.

[8] This count has been decreased by two on account of Israel and Iceland not having a data entry for the variable 'Climate Change Performance'.

It is noted that the Climate Change Performance and Readiness for Climate Change indicators have been found not to be significant. The multivariate equation is presented below;

Climate change scepticism = 0.014*eduyrs – 0.004*agea – 0.026*lrscale + $4.3*10^{-4}$ *hinctnta - 0.011*Neolib – 2.155*QualEdu + 0.251 GovStab – 0.002*CCPerf – 0.003*CCRead + 5.63

With all the information now in hand, we can analyse the data as it pertains to hypotheses 1(a), 1(b) and 2(a). For the former, the relationship between neoliberalism and climate change scepticism is found to be statistically significant. However, it is not seen to be substantively significant: on a scale of 0 to 100, every one point increase in neoliberalism only decreases the belief of climate change as a human effect by 0.011, on a scale of 1 to 5. That is to say, if a country's neoliberalism score (keeping in mind that the lowest score in our sample, Russia at 58.2, is 23.5 points away from our highest, Switzerland at 81.7) increases by ten points, we will only see a swing towards climate change skepticism of 0.1 out of a possible 4 units.

Moving to our hypothesis 1(b), we are contending with the link between ideology and climate change skepticism. The regression shows that, while the relationship is significant, it is again not substantive. A one point increase in ideology (i.e. towards the right, on a scale of 0 to 10) only changes our dependent variable by 0.03 points; it is extremely minimal, which conflicts with much of the literature. Lastly, analysing hypothesis 2(a), the relationship between government stability & efficacy and climate change scepticism is both statistically and substantively significant. For every one point increase in governance (on a scale of 0 to 5, with the lowest and highest rankings in our sample again being Russia at 1.77 and Switzerland at 4.29) we see a full 0.25 swing away from climate change scepticism.

Overall, then, the results suggest that the hypotheses concerning neoliberalism and ideology's potential relationship with climate change scepticism are established, and we can reject the null hypotheses. Yet it is also found that the effect of both neoliberalism and ideology is small in the European countries sampled. Concerning hypothesis 2(a), we can

both reject the null hypothesis and determine that the quantifiable effect of governance capability on climate change skepticism is significant. Looking to the theoretical framework in retrospect, we can see that the prior research largely bore out our assumptions to be true, though it is seen to be much less extreme an effect in Europe as it is in the United States, where much of the literature (particularly concerning neoliberalism and ideology) was based. This is not surprising, as it is well documented how capitalist and polarized America is, to a degree not generally associated with Europe.

4.4 Interactions

In order to interpret the data for a successful understanding of the dynamics at play our two remaining hypotheses, we must employ interaction models to free both the slope and the intercept for the interactive effect of neoliberalism (H1(c)) / governance (H2(b)) on ideology, before seeing its resultant effect on climate change scepticism. For the former we plot neoliberalism on the X-axis against the marginal effect of the left-right scale on climate change scepticism on the Y-axis, with the neoliberalism indicator as the moderating variable on ideology. For the latter we plot governance/stability on the x axis against the marginal effect of the left-right scale on climate change scepticism on the Y-axis, with the the stability indicator as the moderating variable[9]. The results are presented in Figure's 2 and 3, respectively, on the next page. We note, too, that a histogram is included on the graph, which marks the percentage of countries falling under the values of neoliberalism / governance (stability) as indicated on the X-axis'.

4.4.1 Neoliberalism/Ideology

With respect to Figure 2, below (in 4.4.3), we can see that for the first few countries on the left of the graph there is no significant variation in the measure, as the confidence interval includes zero up until a neoliberalism value of about 63. On the countries on the right side of the graph – i.e. with higher levels of neoliberalism than 63 – the effect on the left-right

[9] The Random Intercept / Random Slopes Models for both Neoliberalism / Ideology and Governance (Stability) / Ideology are affixed in Appendix A4. They include the standard deviations of both the slope and the intercept across countries (the random effects parameters).

scale relationship with scepticism decreases as it progresses. Further, where many countries cluster, in the mid-70's scores for neoliberalism, the confidence interval narrows, suggesting we can be more sure of the exact variation in the left-right scale/scepticism relationship. The interactive effect of neoliberalism on ideology (i.e. the slope) is calculated at -0.002: the graph shows that the effect of a one-unit increase of ideology on skepticism is reduced by -0.002 across values of neoliberalism. This is an odd finding given the findings of hypotheses 1(a) and 1(b); the interaction mutes the effect of ideology on climate change scepticism as neoliberalism goes up, rather than compounding it. However, it is noted that the non-interactive effect of neoliberalism is 0.012 in this model, as opposed to -0.011 in the regression model used in §4.3, which is the source of the unintuitive result.[10] We conclude that there is a statistically significant but minor interactive effect of neoliberalism on ideology as it pertains to climate change scepticism. We can reject the null hypothesis, yet the interactive effect mitigates rather than accentuates ideology; it is in the opposite direction from what was predicted in H1(c).[11]

4.4.2 Governance (Stability) / Ideology

With respect to Figure 3, below (in 4.4.3), we can see that for the first three countries (Russia, Italy and Hungary) on the left of the graph there is no significant variation in the measure, as the confidence interval includes zero up until a stability value of about 3.05. For the remaining countries – i.e. with higher levels of stability than 2.5 – the effect on the left-right scale relationship with scepticism decreases as it progresses. Further, where many countries cluster, at about a stability score of 3.3, the confidence interval narrows, suggesting we can be more sure of the exact variation in the left-right scale/scepticism relationship. The interactive effect of stability on ideology (i.e. the slope) is calculated at -0.024: the graph shows that the effect of a one-unit increase of ideology on skepticism is reduced by -0.024 across unit values of stability. This is consistent with hypotheses H1(b)

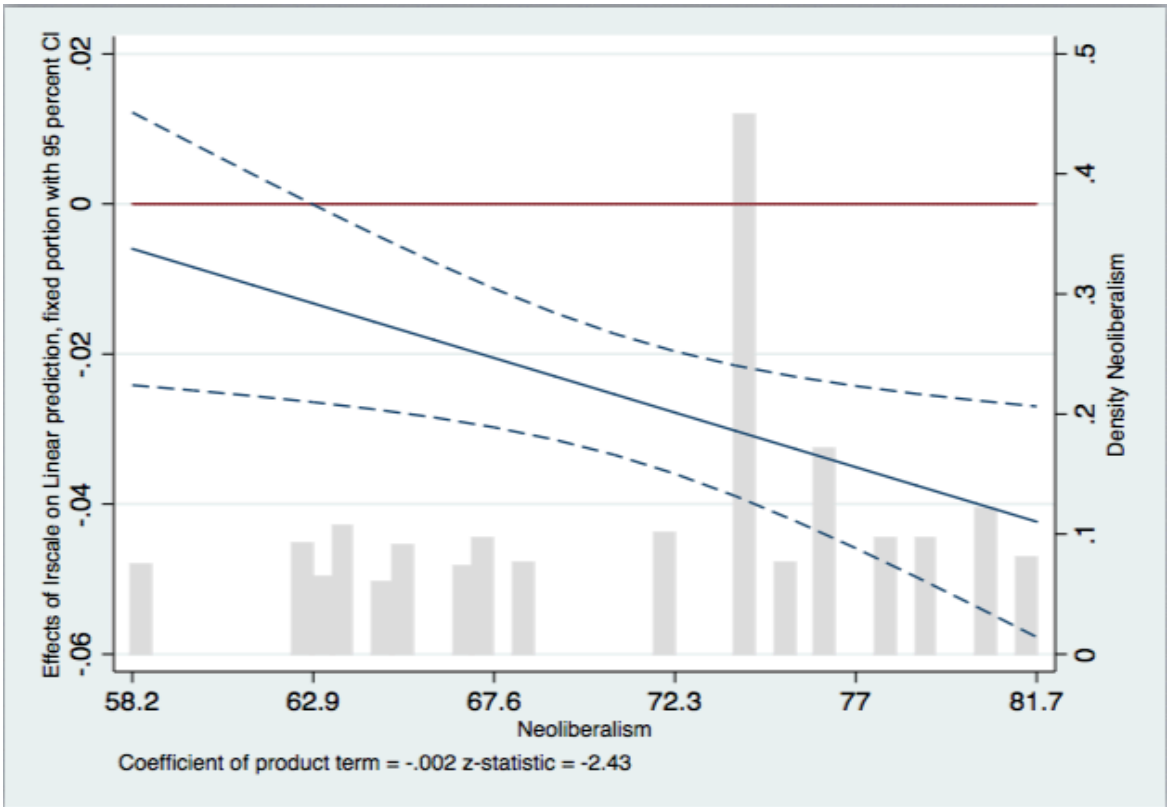
[10] The non-interactive co-efficient for ideology, as per Appendix 7.4 (ii), is 0.084, positive rather than negative as per §4.3. This has no bearing on H1(c), despite its inconsistency.

[11] All coefficients, as per Appendix 7.4 (i), are significant, again with the exception of climate change performance and readiness for climate change.

and H2(a): Stability has a mitigating effect on ideology's relationship with climate change skepticism.[12] The z-statistic, reflecting the average number of standard deviations neoliberalism is away from its mean, is -3.77. We infer that there is a minor interactive effect of neoliberalism on ideology as it pertains to climate change scepticism, yet one that is statistically significant, and thus we can reject the null hypothesis and confirm the tenets of hypothesis 2(b).[13]

4.4.3 Visualisations

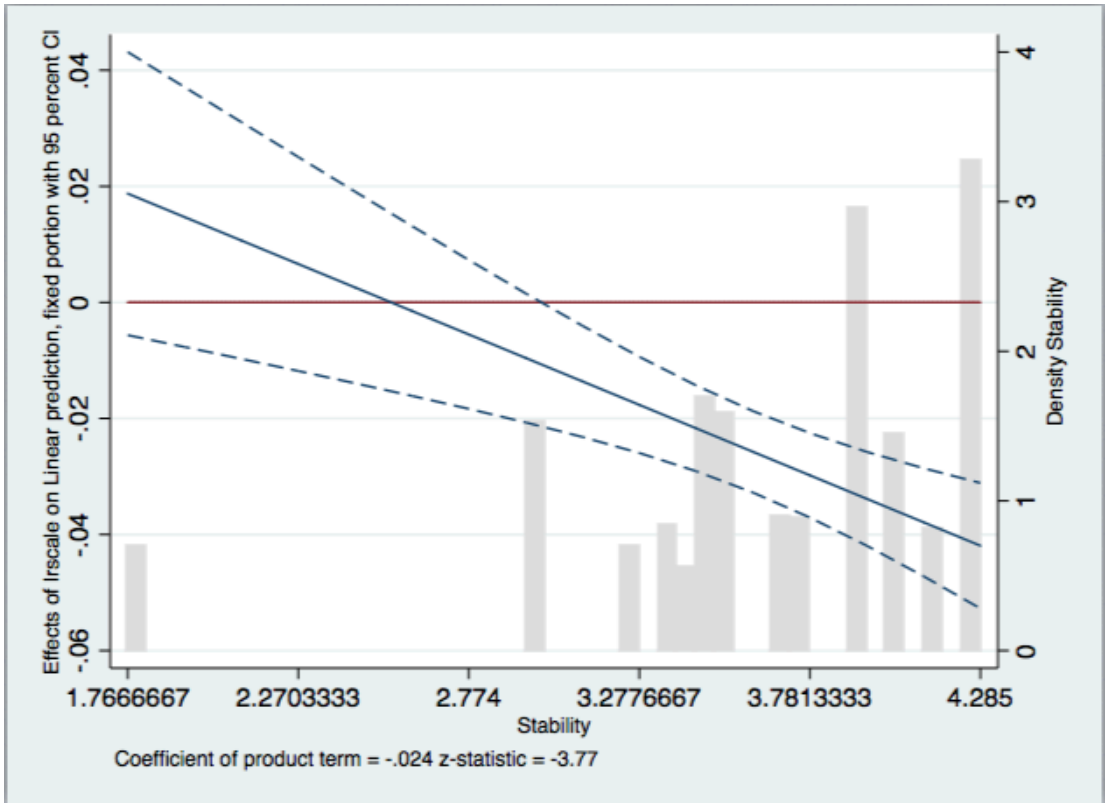
Figure 2: Margins Effects Plot for Ideology/Neoliberalism on Climate Change Scepticism



[12] It should be noted that the non-interactive coefficients, as per Appendix 7.4 (ii), are 0.321 for stability, and 0.061 for ideology. Again, ideology is now positive rather than negative as it was in §4.3. This has no bearing on H2(b), despite its inconsistency.

[13] All coefficients, as per Appendix 7.4 (ii), are significant, again with the exception of climate change performance and readiness for climate change.

Figure 3: Margins Effects Plot for Ideology/Stability on Climate Change Scepticism



5.0 Discussion

A clear story emerges from these results. With regards to neoliberalism, we find that there is a causal relationship whereby more capitalist, free-market societies engender a public more sceptical to the science of anthropogenic climate change. The study also confirms that the findings done by McCright & Dunlap in the United States are transferable, namely that ideology has a clear effect on scepticism in Europe, albeit a more muted one. Interestingly, however, it finds that despite the successful conclusions generated from the first two hypotheses (regarding neoliberalism and ideology, as detailed above), the interactive effect of neoliberalism on ideology's effect on climate change scepticism is negative: as neoliberalism is applied in increasing value, ideology plays less of a role in predicting scepticism. Further research on this would be interesting; it could be on account of Europe's politics being less partisan, indicating a lower correlation between neoliberalism and wider ideology. As it concerns governance stability and efficacy, both our hypotheses – 2(a) & 2(b) – have had their null rejected. Stability in government has been shown to decrease climate change scepticism, and its interactive effect on ideology has been to mute the ideology/climate change relationship further. It would be interesting to see whether a similar research model, when applied to the United States, would yield the same results. As alluded to earlier, greater stability, along with financial security, could have the effect of psychologically barricading one off from the problem, rather than allowing one the breathing space to tackle it. The ideological partisanship that is in view in the United States would make this delineation between attitudes presumably more stark.

The link between the hypotheses regarding neoliberalism and those regarding government stability and effectiveness is plain to see. If we can transition to a more regulated, less capitalist minded society, the implications will be severe. Will societies that are no longer achieving the same financial growth that neoliberalism has unleashed in the past four decades be responsive to a shift in socio-economic practice? One fears that if they do not, the stability of the given government, its robustness and efficacy, will crater in the fallout. However, previous research (Norgaard, 2011) suggests our current lifestyle paradigm is not entirely to blame for this impasse. Greed is not the sole reason why scepticism abounds; there are a number of psychological factors that also accentuate our apathy. Fear, guilt, a

sense of hopelessness, they all add to the clamour that the demographics – age, education, race, ideology, etc. – populate, as well. There is a clear link between ideology and psychology, the latter informing the former. The conclusions of the last hypothesis suggest that stable governance accentuates the effect of a progressive constituency in predicting low levels of scepticism, in part because – as said earlier – it provides an economic buffer and greater social security in which the issue can be psychologically approached and solved. This, however, requires a left leaning, non-neoliberal ideology. Similarly, stable governance could be used to accentuate neoliberalism itself, if the society is already right-wing; it will act to provide an economic buffer and greater social security which instead will psychologically blind the constituency.

Further studies would be welcome in the attempt to clearly delineate the lines and interactions between ideology and psychology as it pertains to climate change scepticism; government stability is just one proxy by which we can estimate it. A more refined methodology replete with ensuing data sets quantitatively measuring psychological factors would be a boon. At present, very little research has been done to assess this with respect to pubic opinion on climate change, and a wide majority of this has been qualitative rather than quantitative. For example, the effect of religion – in some cases with the inherent belief that it is human destiny to 'master' nature – would be an intriguing avenue to go down. Similarly, the effect of centrists, who may be considered to be too lukewarm on the subject to deploy the sort of urgency that the science of the issue suggests, and thus bolster the overall effect of the sceptics, would also be fascinating. Furthermore, the data set used for this dissertation, the 8th round of the European Social Survey, is the first of its kind to include a questionnaire exploring public attitudes to climate change. A second survey, or more, would be helpful in understanding the temporal perspective of climate change scepticism.

The limitations of the research also extends to the sheer gravity of studies done on the United States at the exclusion of all else. Due to the United States' brazen examples of ACC denial, they have tended to attract the lion's share of the spotlight. The studies done on the subject regarding Europe have been narrowed to national studies, rather than perspectives on the bloc as a whole; the research done on the outlook of the third world is even more

disheartening. Finally, with regards to the aggregate, country level data, the oft criticised World Governance Indicators used to compose the Governance/Stability indicator in this thesis could also use refining. Common objections have been that they are arbitrary, non-reproducible, composed with hidden biases, lacking in conceptual clarity, overly complex, and non-temporal. It is understood that governance, like most facets of politics, is a highly subjective proponent, yet independent of this we recognise the conclusions generated from H2(a) and H2(b) will only go so far as the solidity of the indicators will allow.

In general, the conclusion of this article is that climate change scepticism is not fully understood and requires more research across the board. It has been found that anthropogenic climate change scepticism has fluctuated in the past thirty years under the influence of number of different factors, yet throughout the gap between the severity of the problem and the lack of public salience has been discernible throughout, all across the Western hemisphere. As a result, no nation is fully prepared to either mitigate climate change's effects socially, economically or politically, or even discuss it on true face value. It is only with the support of an enlightened and unbiased public that the problem can be addressed.

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7.0 Appendices

7.1: Primary Variable Statistics

Distribution Statistics

VARIABLES	Range	Relationship	Mean	SD
Climate change scepticism	0-5	Inverse	3.42	0.80
Years of full time education completed	0-54	Normal	13.04	3.85
Ideology (Left to Right)	0-10	Normal	5.16	2.24
Age	15-100	Normal	49.14	18.61
Neoliberalism	0-100	Normal	71.64	6.50
Quality of education	0-1	Normal	0.86	0.04
Stability	0-5	Normal	3.61	0.57
Climate change performance	0-100	Normal	53.81	11.09
Readiness for climate change	0-100	Normal	65.80	4.52

7.2: Correlations

Aggregate Level Correlations

Variables	(1) ccnthum	Neoliberalism	QualEdu	Stability	CCPerf.
Neoliberalism	-0.0562***	1			
QualEdu	-0.0849***	0.755***	1		
Stability	0.0269***	0.759***	0.528***	1	
CCPerformance	0.0217***	0.288***	0.128***	0.570***	1
ReadinesstoCC	0.0118*	0.528***	0.472***	0.772***	0.527***

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Education Lever Correlations

Variables	(1) eduyrs
eduyrs	1
QualEdu	0.174***

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

7.3: Regressions

Education Lever Variable Regression

VARIABLES	(1) Model 1
Years of full-time education completed	0.0163***
	(0.000876)
Quality of Education	-0.347***
	(0.0857)
Constant	3.565***
	(0.0730)
Observations	42,913
R-squared	0.008

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

7.4: Random Intercepts / Random Slopes Models

(i) Neoliberalism / Ideology

VARIABLES	(1) Model 1
Age of respondent, calculated	-0.004***
	($2.4*10^{-4}$)
Household's total net income, all sources	$4.2*10^{-4}$***
	($1.6*10^{-4}$)
Years of full-time education completed	0.014***
	(0.001)
Placement on left right scale	0.084*
	(0.046)
Neoliberalism	-0.012*
	(0.007)
c.lrscale#c.Neoliberalism	-0.002**
	(0.001)
Quality of Education	-1.625*
	(0.867)
Stability	0.281***
	(0.088)
CC Performance	-0.002
	(0.003)
Readiness to CC	0.008
	(0.008)
Constant	4.375***
	(0.552)
Standard deviation - Slope	0.017
Standard deviation - Intercept	0.092
Observations	33,741
Number of groups	21

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

(ii) Governance (Stability) / Ideology

VARIABLES	(1) Model 1
Age of respondent, calculated	-0.004***
	($2.4*10^{-4}$)
Household's total net income, all sources	$4.3*10^{-4}$***
	($1.6*10^{-4}$)
Years of full-time education completed	0.014***
	(0.001)
Placement on left right scale	0.061***
	(0.024)
Stability	0.321***
	(0.086)
c.lrscale#c.Stability	-0.024***
	(0.006)
Quality of Education	-1.666**
	(0.842)
Neoliberalism	-0.013**
	(0.007)
CC Performance	-0.002
	(0.003)
Readiness to CC	0.007
	(0.008)
Constant	4.475***
	(0.536)
Standard deviation - Slope	0.014
Standard deviation - Intercept	0.089
Observations	33,741
Number of groups	21

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1