SKEWED INTERACTIONS WITH EVIDENCE: A DISCUSSION OF FIXED SEXUALLY PREJUDICED BELIEFS.

A thesis submitted in partial fulfilment of the requirements for the degree of

MASTER OF ARTS
In PHILOSOPHY
Of
RHODES UNIVERSITY

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February 2017

In this thesis, I will argue that a challenge to the combatting of sexual prejudice (more commonly known as homophobia) through argument and evidence is that those on both sides of the issue are prone to a phenomenon known in psychology as confirmation bias. While the motivating concern of the thesis is sexual prejudice, and while I do discuss sexual prejudice throughout the thesis, I will focus mostly on confirmation bias, with the understanding that the picture I set out will have implications for combatting sexual prejudice at a later stage. The term confirmation bias refers either to the tendency to look for evidence which confirms one's already-held beliefs, or to engage differently with evidence based on whether or not you agree with its conclusion. After dissecting two paradigmatic experiments which explore these two kinds of confirmation bias, and arguing that they can be further broken down into sub-phenomena, I will focus on the latter kind, as I think it is the more relevant to sexual prejudice. Its essential effect on beliefs is to hold them steady in the face of evidence. In an attempt to explore the motivations we might have for engaging in this form of confirmation bias, I will argue that we can understand the tendency through a combination of a picture of beliefs as forming an interconnected web, and an understanding of the effect of affective elements on belief. Furthermore, given this motivational story, it is sometimes reasonable to hold beliefs steady. I will argue that finding the balance between giving up beliefs too easily in the face of contrary evidence, and holding onto them too rigidly, is an epistemic virtue. Finally, defending my picture from the objection that the mental states I discuss do not count as beliefs, I will argue that confirmation bias is a way of maintaining fixed beliefs.

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Introduction.

In this thesis, I will argue that part of the problem with combatting sexual prejudice (more commonly known as homophobia) through argument and evidence is that those engaging in the debate are prone to confirmation bias. To phrase this in more commonly epistemic terms, people engaging in the debate are prone to having fixed beliefs. While the motivating concern behind this thesis is sexual prejudice, and while I will be touching on sexual prejudice in my thesis, I will not be focusing on it in any great detail. Rather, I will be looking at the kind of epistemic and psychological factors that affect debates, with the view that the work I do here will have implications for how we approach disagreement and debate in the realm of sexual prejudice. I think that what I say here will have implications for debate that extend to topics beyond sexual prejudice. I will not, however, be arguing that this is the only thing that affects these kinds of debates – in fact, I think it is one, very specific, though important, factor to consider when one is thinking about engagement in areas such as sexual prejudice. This way of engaging with evidence is, I will argue, partly a result of the way our belief-systems function as a whole, and partly a result of the importance beliefs of this kind often have to us.

In Chapter 1, I will argue that the term confirmation bias actually refers to a grouping of phenomena, only some of which are relevant to sexual prejudice in the way I am interested in. There are three in particular that I isolate – ideé fixe, hyper criticality, and polarization. Ideé fixe is the central phenomenon here. It is essentially the tendency to keep a belief or beliefs steady in the face of contradictory evidence. Hyper-criticality – the tendency to evaluate disconfirming evidence more harshly than it deserves, and to treat confirming evidence as being better than it deserves, is a way of maintaining a belief in the face of contradictory evidence, and thus a way of engaging in ideé fixe. Polarization can be a result of the desire to hold beliefs steady, but is a less understandable phenomenon than either ideé fixe or hyper-criticality. In Chapter 2, after briefly going into more detail on what I think sexual prejudice is, I will try to explain how the phenomena might come to characterise the way some of our beliefs work, arguing that if we see beliefs as forming a web, we can gain some understanding of the way in which our doxastic systems might lead us to hold some beliefs steady. Using Quine, I will try to explain the phenomena by appealing to a web picture of belief. While this gives us some answers, I argue that it only partly captures what is going on in many cases where beliefs are prone to the phenomena. I argue that the emotional, attitudinal and value-laden aspects of some beliefs play a vital role in explaining why we hold them fixed. I will not be trying to give a full, comprehensive account of all the possible motivations for confirmation bias. I rather want to attempt the beginning of an explanation – one I think is plausible, but is unlikely to capture everything that

could be motivating it. Having thus set out the picture of what I think is happening when we hold beliefs steady, in Chapter 3 I will look at the tendency towards the phenomena in the light of intellectual virtues and vices, arguing that the tendency towards ideé fixe can be seen as a tendency towards the epistemic vice of rigidity. Finally, in Chapter 4, I will defend this picture from the view that the mental states I have been discussing do not count as beliefs, arguing that they are in fact a kind of fixed belief.

While there has been work done on confirmation bias, the majority of it has been done in Psychology. There have been a fair number of experiments detailing it. There has also been some work done on it on philosophy, but it is fairly neglected territory here. As far as I know, though, my particular focus on sexual prejudice is new. I also think that the way I try and break down confirmation bias into its components, and the particular motivational account of it that I give, have not been explored before. I am trying to sketch out a plausible account of how these phenomena might work. Much of what I say touches on empirical questions, however, and may need to be tested at a future date.

This project is, I think, important as a starting point to thinking about the kinds of fixed beliefs we encounter in argument generally. More specifically, I think it is important because of its possible applications in the realm of prejudice. There has been recent progress in the area of prejudice – the increased number of countries (most recently the United States of America) who have legalised marriage between same-sex couples. Despite this, racist, sexist, homophobic, and other prejudicial beliefs are still very much in effect. From groups who are explicitly anti-homosexuality, such as the Westboro Baptist Church, to anti-Islamic beliefs in Western countries to xenophobia in South Africa, prejudice is very much present in the lives of people today. In this thesis, I am going to be focusing on what is commonly referred to as homophobia in particular. Though there has recently been progress in this area, it is still fairly widespread, as is shown by the recent resistance to the legalisation of gay marriage (support for the legalisation of same-sex marriage in the U.S.A recently was between 57% and 60%,[1] depending on where you look. This is good, but not yet enough, particularly when contrasted with the challenges LGBTIAQ people tend to face, and the levels of bullying gay teenagers experience. According to the Human Rights Campaign website, 4 in 10 LGBTIAQ youth live in communities they perceive as being unaccepting of LGBTIAQ people. LGBTIAQ youth are twice as likely to have been physically assaulted, kicked or pushed at school as straight youth. LGBTIAQ youth are

[1] New, 'In the Wake of Obergefell, Three New Polls Show Reduced Support for Same-sex Marriage', Accessed 10 November 2016 from http://www.nationalreview.com/corner/421443/obergefell-same-sex-marriage-poll-reduced-support ; Dutton, De Pinto, Salvanto, and Backus, 'Poll: Americans' views on same-sex marriage', Accessed 10 November 2015 from http://www.cbsnews.com/news/poll-americans-views-on-same-sex-marriage/ ; Clement and Barnes, 'Poll: Gay Marriage Support at Record High', Accessed 10 November 2015 from https://www.washingtonpost.com/politics/courts_law/poll-gay-marriage-support-at-record-high/2015/04/22/f6548332-e92a-11e4-aae1-d642717d8afa_story.html?utm_term=.7ca69d88a04a Accessed 01 November 2015

only half as likely as straight youth to say that they are happy. 92% of LGBTIAQ youth say that they hear negative things about being LGBTIAQ. That said, 75% of LGBTIAQ youth think that most of their peers do not disapprove of their LGBTIAQ identities.[2] The remaining work to be done in combating homophobia can also be seen from the institutionalised anti-LGBTIAQ prejudice that can be found in many countries (for example, homosexuality is still illegal in 75 countries, mainly in Africa and Asia, and carries the death penalty in five[3]).

The phenomenon commonly termed homophobia is thus still a concern which needs to be addressed – and one which is being addressed. This thesis, while it does not directly suggest a new way of engaging with homophobia, lays the groundwork for a picture which has implications for how we continue to engage in the area.

i. Terminological concerns.

The relevant literature around the phenomenon has raised concerns about the term "homophobia". As G.M. Herek[4] suggests, the term "homophobia," by making it sound like anti-LGBTIAQ attitudes and beliefs are a form of irrational fear, makes it seem as though homophobia is a form of pathology. Furthermore, it is important to bear in mind that acts, beliefs or attitudes which are traditionally labelled homophobic are often directed at people who do not necessarily fall under the label of homosexuality – bisexuality, asexuality, pansexuality, intersexuality and transgender people, for example, are also the targets of prejudice. People are targeted both for their sexual orientations and their gender identities, and the two are often related. Stereotypes about gay men, for example, tend to include gender identity – gay men are seen as feminine, and this is seen as negative.

An alternative to the term "homophobia" is "heterosexism". Generally, though, "heterosexism has referred to societal-level ideologies and patterns of institutionalized oppression of non-heterosexual people."[5] I am not only concerned with anti-LGBTIAQ ideology – I think negative attitudes towards the LGBTIAQ community are equally important.

As opposed to either "homophobia" or "heterosexism", Herek suggests the term "sexual prejudice." He uses it specifically to refer to prejudice against people who are homosexual and

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[2] Unknown author, 'Growing up LGBTI in America: View Statistics', Accessed 10 November 2015 from http://www.hrc.org/youth/view-statistics/#.WJyswn9MiBI

[3] Accessed 01 November 2016 from https://www.google.co.za/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&cad=rja&uact=8&ved=0ahUKEwiJssyc44PSAhUKOsAKHZBSBI4QFggYMAA&url=http%3A%2F%2Fold.ilga.org%2FStatehomophobia%2FILGA_State_Sponsored_Homophobia_2015.pdf&usg=AFQjCNGNXQnPuX0O5vdhCXQ-IvlnissJnw&sig2=_TqadIVRaDM-IfRIIDPBEw&bvm=bv.146496531,d.d24

[4] Herek, 'The Psychology of Sexual Prejudice', p. 19

[5] Herek, 'The Psychology of Sexual Prejudice', p. 19

bisexual, but I think the label is broad enough to cover the other actions, beliefs and attitudes which traditionally fall under the label "homophobia". I think that this broader label is the most appropriate of the three available. This is partly because of the limits of both of the other terms. It is also partly because of the fact that beliefs, attitudes and actions labelled homophobic apply to people both on the grounds of sexual orientation and gender identity, or a combination of the two. That said, the examples I use will be predominantly of prejudice against homosexual people. I am concerned that there may be differences in the explanatory frameworks that make sense of, for example, transphobia. I think there are likely to be elements in common, but it is possible that not everything I say will apply to all forms of sexual prejudice. I will use the term "sexual prejudice" given the problematisation of the terms "homophobia" and "heterosexism", but I will use it in a relatively narrow sense, to refer to prejudice against gay and lesbian people. This is not because I think the other forms of sexual prejudice are not important, but because I am concerned that I may accidentally skate over subtleties of people's lived experiences by trying to make blanket claims about all kinds of sexual prejudice. I think that a lot of what I say will still apply, but there is work that needs to be done in looking at where the experiences of people who have been on the receiving end of sexual prejudice converges, and where it diverges. I do not want to lump the groups together and miss important differences. Bisexual people face bi-erasure, for example. Bisexual and transgender people in particular face prejudice both from the heterosexual and homosexual communities. In terms of the kinds of sexual prejudice I have included, one might argue that I am still lumping groups with different lived experiences together. The gender differences between gay men and lesbian women do play a role in their lived experiences. I think there is enough in common, however, that I can talk about homosexual people as a group. As I have said, I do think that what I say has implications for sexual prejudice against other groups as well – I just do not want to skip over what may be important differences.

Finally, it is not yet clear from the preceding discussion what sexual prejudice actually consists in, though I have been using a commonsense understanding of the term. For the moment, I will say that I am looking at individual prejudice, rather than structural prejudice. I think that there are two components associated with individual sexual prejudice (and, in fact, prejudice more generally, though I will continue to speak about sexual prejudice specifically). These components are negative beliefs – negative beliefs about people of certain sexual orientations, the moral status of LGBTIAQ people, etc. – and negative attitudes and/or affective states directed at people on the basis of their sexuality. I will, however, discuss the question of what sexual prejudice actually consists in in more detail in Chapter 2. Having described the outline of my thesis, and clarified the term "sexual prejudice", I will move on to the main body of my argument.

Chapter 1: Confirmation Bias in its Different Forms.

It is evident that there is a phenomenon that takes place when people engage in debates and disagreements, whether political, moral or even factual. It is common, and it is fairly likely that we have all experienced it at one point or another. Sometimes, when two people are arguing for points that contradict one another, they end up talking past each other. Each ostensibly listens to the other, each gives reasons and evidence for her claim – and yet nothing seems to register. The other person's evidence seems weak, or does not seem to count as proper evidence at all. In the end, the debate often does not go anywhere. This description captures an extreme form of a pattern that I think can be seen in disagreement, and it is this extreme form that I am interested in, because it is the clearest (and I think a common) instance of how a particular phenomenon – confirmation bias – impacts on our everyday disagreements.

To use a concrete example, debates about the ethical status of homosexuality and sexual prejudice often (though not always) progress along these lines.[6] Often when two people or groups have a discussion about homosexuality, each presents the other with reasons for their own position – homosexuality is ethically unproblematic or homosexuality is wrong – and each seems to listen to the other (in some cases this is not true, but that is a different phenomenon). Despite this, neither responds to the evidence the other presents. Neither is the slightest bit convinced – partly because they are not responding to the other's evidence as the other does. Person A argues that there is nothing wrong with homosexuality. She might think that it is not unnatural - it is found in other species. She may believe that people cannot choose who they fall in love with, that love is a good thing, whether between a straight couple or not. She might believe that gay couples are as likely to be faithful and happy as straight ones. She likely does believe that it is wrong to be sexually prejudiced because it involves discrimination. Person B might argue that homosexuality goes against God's will. She might think that children of gay parents are more likely to have a tough time at school. She might argue that it is unnatural in that people were not designed to be homosexual (whether by a deity or by evolution). People on either side of the debate may have a combination of these views, or completely different ones – these are merely examples of possible beliefs that they may have. Neither Person A nor Person B, however, takes the other one's evidence as being good, though both think that their own evidence is conclusive. Each is critical of the other's evidence or, in some cases, they "just don't buy" it. Often they interpret evidence differently – for example, Person A might think children of gay parents having a tough time at school is proof that sexual prejudice is wrong and harmful, rather than that

[6] I'm talking about homosexuality rather than using more inclusive terms for the sake of expediency, but what I say should apply to the rest of the LGBTIAQ community as well.

homosexuality is. Person B, on the other hand, might interpret this as evidence that gay couples do not prepare their children well for school life. The debate does not end with consensus, but with each person still firmly convinced that she is right.

I suspect that what is happening in these cases is that each of the participants is engaging in a phenomenon called confirmation bias.[7] There have been experiments within social psychology that explore this broad psychological phenomenon. Two in particular stand out – an experiment done by Wason in the early 1960s, and a later experiment done by Lord, Ross and Lepper. Each of these is a paradigmatic example of one of two main ways of approaching confirmation bias – each of which picks out different possible elements of the phenomenon, and each of which has different concerns about what we are doing wrong when we are being affected by it.[8] I am focusing on these two experiments because they seem to embody the two main trends in the experiments to do with confirmation bias. Other experiments tend to be similar to these two, many are based off these original designs, and they often reference one or both of them. I think that the main difference between the two trends is that the first kind – the one exemplified by the Wason experiment – tends to focus on the kind of information we look for when we are testing hypotheses that we hold. The second – the one exemplified by the Lord, Ross and Lepper experiment – tends to be more relevant to the way we engage with evidence that we already have, or that we are presented with.

Roughly, confirmation bias refers to a tendency to look for evidence which confirms rather than disconfirms one's original hypothesis or beliefs about a particular subject, and to often accept that evidence with little critical thought. Closely related to this is what has been referred to as the disconfirmation bias – the tendency to avoid disconfirming evidence when one can, and to react to disconfirming evidence far more critically than to confirming evidence. Lord, Ross and Lepper, for example, found that we tend to think that studies which support our views about a topic (capital punishment in their case) are better designed and implemented than studies which contradict our initial beliefs. Confirmation bias and disconfirmation bias are closely interrelated, and I suspect that in practice they often occur together.

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[7] They may be doing so to greater or lesser extents, and one of them may still be right.

[8] Nickerson, 'Confirmation Bias: A Ubiquitous Phenomenon in Many Guises.' For examples of the Wason-type experiments, see Levine, M. (1970). Human discrimination learning. The subset-sampling assumption. *Psychological Bulletin, 74,* 397-404.; Millward, R. B., & Spoehr, K. T. (1973). The direct measurement of hypothesis-testing strategies. *Cognitive Psychology, 4,* 1-38.; Tweney, R. D., Doherty, M. E., Worner, W. J., Pliske, D. B., Mynatt, C. R., Gross, K. A., & Arkkelin, D. L. (1980). Strategies of rule discovery in an inference task. *Quarterly Journal of Experimental Psychology, 32,* 109-123.; For the Lord, Ross and Lepper-type experiments, see, for example, Pitz, G. F, Downing, L., & Reinhold, H. (1967). Sequential effects in the revision of subjective probabilities. *Canadian Journal of Psychology, 21,*381-393, as well as literature around Kardash, C.M. and Scholes, R.J. (1996). Effects of preexisting beliefs, epistemological beliefs, and need for cognition on interpretation of controversial issues. *Journal of Educational Psychology, 88(2)* – 260-271.

1.1. The Phenomena

It seems to me that the experiments that have been described as illustrating confirmation bias are actually illustrating several different sub-phenomena. Each has, as a broad purpose, the confirmation of initially formed responses to a situation, or previously held beliefs.[9] In this section, I will discuss the two different experiments, and draw out the sub-phenomena that I think are present in them.

1.2. The Wason Experiment.

The experiment that best illustrates the first approach to confirmation bias is one which was done by Wason in 1960. In this experiment, participants were given a set of three numbers. Their task was to try and find the rule that governed the number sequence, by giving sets of three numbers and being told whether or not they fit the rule. The initial number series was 2, 4, 6, and the rule was "three numbers in increasing order of magnitude." Wason found that generally, once people had an idea of what the rule might be (most assumed it was three consecutive multiples of two), many of them would test this by offering further sets of numbers that fit this rule (in other words, they looked for confirming evidence). A statistically significant number did not look for disconfirming evidence – i.e. try a number series that did not fit the rule they were thinking of. Furthermore, when they were told that their first rule was wrong, they tended to try rules that were really just adaptations or re-interpretations of the first one, rather than trying a radically different view. They would, for example, ask whether the second number was double the first and two thirds of the third. The second rule participants tested usually described the number sequence in such a way that the numbers involved would again explain the thing that had struck them at first – the fact that the numbers given were multiples of two. Wason hypothesises that "[i]t seems likely that in these cases the subjects cannot change their concepts (as judged by their instances) but change their description of them. Changing the description of a rule makes them think they have changed the rule itself: a verbal adjustment is made to satisfy the demand for a different hypothesis."

Wason's picture of confirmation bias lays out several different phenomena that fall under, or are related to, the broad description of confirmation bias.

Phenomenon 1: The most prominent aspect of the phenomenon Wason describes is the one which most basically deserves the label "confirmation bias". When faced with a task that involves gathering evidence about a particular hypothesis, we have a tendency to look for evidence that

[9] I mean this fairly loosely. I think the holding onto one's initial responses or previously held beliefs is what justifies the label confirmation bias, although I will want to be fairly specific later on about which kind I am interested in and why.

confirms our initial hypothesis and avoid, or at least fail to look for, information which disconfirms it. When one engages in this phenomenon, one is tending to look for evidence to support one's initial impression or belief (in the Wason case, the fact that what one was initially struck by in the number series was that it took the form of multiples of two). One tends, I suppose, to not think of looking for disconfirming evidence, even though this is as necessary to testing a theory as confirming evidence.

Phenomenon 2: Wason's criticism of his participants' interpretation of evidence suggests that people have a tendency to focus on confirming evidence to the point where they struggle to consider that their initial hypothesis was false. At the very least, they do not do so through their own gathering of evidence. If we are continually looking for evidence which supports our own claims, and never for evidence which challenges it, then we run the risk of missing important falsifying[10] evidence. If one looks for only supporting evidence for a belief to a large enough extent, then there is less chance that any epistemic process will cause one to give up that belief. Taken to extremes, this can mean that we are actually unable to get to a point where we can consider that our initial hypotheses might be wrong. I doubt, however, that beliefs of the kind dealt with in Wason's experiment are likely to become completely immune to counter-evidence. The participants' beliefs changed, for example, when the participants were told what the actual number series was. The experiment is pointing more towards a tendency to be unable to give up on our initial hypotheses.

Phenomenon 1 and phenomenon 2 are so closely related as to be almost indistinguishable. The more we look only for confirming evidence, and avoid disconfirming evidence, the less likely we are to prove our initial hypotheses wrong. Phenomenon 2 is essentially the state that one could get into if one took phenomenon 1 too far. I have kept these as separate phenomena, because it is possible to engage in phenomenon 1 without necessarily falling into phenomenon 2. The participants in the Wason case demonstrated this in the sense that they responded to being told their initial hypothesis was wrong with varying degrees of adaptability – some did change their approach, some took longer. They were not uniformly focused on confirming evidence, and, depending on how strong their tendency towards phenomenon 1 was, they were varying distances away from phenomenon 2. The two phenomena are parts of the same process, but distinct enough to make it worthwhile to talk about them separately.

Phenomenon 3: The experiment also shows a tendency to use induction to form beliefs about the world. The participants tended to initially check sequences that would confirm their initial hypothesis. They showed a tendency to prefer a manner of inquiry that was based on making predictions from positive evidence, rather than on one which emphasised testing hypotheses against disconfirming evidence. This worried Wason, who argued that "the experiment demonstrates the

[10] I am using the term "falsify" here simply to mean "prove to be false" and not in any technical sense.

dangers of induction by simple enumeration as a means of discovering truth. In real life there is no authority to pronounce judgement on inferences: the inferences can only be checked against the evidence."[11] This effect is heightened by our reluctance to falsify our initially held beliefs or hypotheses. We often base our conclusions on induction from evidence, but we tend to only look for confirming evidence. Again, this is very close to what is happening in phenomenon 1. One can, however, form beliefs based on induction, and still look for disconfirming evidence. The belief-forming process is, in this case, still inductive, but it is also tested by looking for disconfirming evidence. A belief being based on an inference from positive evidence is not the same thing as only looking for positive evidence. The tendency towards looking for confirming evidence without looking for disconfirming evidence as well is what makes induction problematic. It means that the hypothesis-testing process – whether inductive or not – is biased towards the initial hypothesis of the believer.

There are two elements to confirmation in the context of disagreement or inquiry. The first is to do with your aim – confirm a hypothesis, in a broad, not necessarily scientific sense. Ideally this hypothesis should be open to change if one discovers that it does not explain what it is trying to. The second is to do with the kind of evidence you might have. So, you can have confirming evidence – positive evidence that confirms your hypothesis – and disconfirming evidence against opposing positions, which would in some cases support your own conclusion. Positive evidence can also cause us to form views about the world in the absence of an initial hypothesis, but in the cases I am interested in we do have initial hypotheses. Inductive evidence just is confirming evidence, and can be used to support a hypothesis. So if my hypothesis is that gay people are more likely to be unfaithful than straight people, every observation of a gay couple where a partner has been unfaithful is a piece of confirming evidence – and thus a piece of evidence for the inductive belief. So in terms of phenomena 1-3, phenomenon 1 consists of a tendency to gather confirming evidence for our hypotheses, rather than disconfirming evidence. Phenomenon 2 is to do with the extent to which we engage in phenomenon 1 – it occurs when we gather confirming evidence for our initial hypothesis to the extent that we barely test that hypothesis against disconfirming evidence, or do not do so at all. Phenomenon 3 is part of what motivates phenomenon 1, and part of what leads to phenomenon 2. Induction involves forming beliefs based on positive evidence, so a tendency towards induction brings with it a tendency towards looking for confirming evidence. If we focus too much on the confirming evidence, however, we fail to test our hypotheses against disconfirming evidence, and end up engaging in phenomenon 2.

Wason's criticism of confirmation bias suggests a view of human inquiry that is fairly rational and neutral. His discussion is focused primarily on the kind of epistemic state we ought to be in when

[11] Wason, 'On the failure to eliminate hypotheses in a conceptual task', p. 139

we are engaged in inquiry that is analogous to scientific inquiry. He also thinks, however, that the main quality he picks out as being important for good scientific inquiry - "a willingness to attempt to falsify hypotheses, and thus to test those intuitive ideas which so often carry the feeling of certitude"[12] - is just as important for other kinds of thinking. On his picture, then, when we are engaged in inquiry – even, or perhaps especially, about topics where we are confident of our hypotheses – we ought to cultivate a disposition to try and test our intuitions by looking for disconfirming evidence. In addition, we should be willing to radically change the ideas we are working with if it turns out that they are wrong. I am not sure I fully agree with this picture, though I do up to a point. I do think a certain responsiveness to evidence is important for our beliefs, but I think phrasing it in terms of straight falsifiability would be to oversimplify the factors that affect our beliefs. I would want to qualify it by saying that we can be motivated to hold on to beliefs in the face of some contradictory evidence, depending on the belief and the evidence. I argue later in this thesis that we need to strike a balance between giving up beliefs too easily in the light of disconfirming evidence, and not giving them up in response to evidence that should cause us to change the belief in question. We need to strike a balance between naïve acceptance of any disconfirming evidence and a kind of rigidity that causes our beliefs to remain too fixed.

Phenomenon 4: Wason's experiment also shows a problematic tendency to be narrow-minded when trying to solve problems. Given his discussion of how people tend to continue to guess at rules that are conceptually equivalent to the first one they guessed, his experiment points to a feature of human inquiry that is fairly limiting. He does not directly discuss this, but it is not an unreasonable supposition to make. Sometimes, in order for inquiry to advance, the inquirers need to think in ways different to the usual patterns of inquiry. Perhaps more importantly, when one's initial concept has been proven inadequate, one should try and move onto another one - a move Wason's experiment suggests might be quite difficult to do. New and creative ideas are much harder to come by if one's thinking is constrained by earlier hypotheses. This is not limited to looking for confirmation of one's existing beliefs. Though this is one way in which it might play out, I am rather drawing attention to the tendency to work in the patterns one is used to, even when they have been shown to be ineffective.

Phenomenon 5: Ideé fixe. The term ideé fixe has been used in various ways, but all I mean by it is "holding a belief steady in the face of contrary evidence." This is the kind of phenomenon that can occur when my beliefs cause me to form an expectation about how the world will behave, which is then not met. I might, for example, expect that when I encounter the children of a gay couple, they will be unhappy. When that expectation is not met – I meet the children of a gay couple and they are very happy and well-adjusted – I have two options. I can give up on my belief – that having same-sex

[12]Wason, 'On the failure to eliminate hypotheses in a conceptual task', p. 139

parents is harmful to children. Alternatively, I can try and explain the evidence away by arguing that the conditions in the world interfered with the evidence in some way, or by moving to a more general belief, such as "the children of most gay couples will be unhappy". I might think, for example, that the children's grandparents were very involved in their upbringing, and this is causing them to be happier than they would otherwise have been. This latter course seems to involve holding the basic negative belief about homosexual parents steady. I think that both the Wason experiment and the Lord, Ross and Lepper experiment, which I will speak about in the next section, show this phenomenon. In the Wason experiment, the beliefs were held fixed by seeking confirming evidence, and by avoiding disconfirming evidence. In addition, if the beliefs in question were held to be unfalsifiable, it would be a sign that they were being held steady – a sign that they were fixed in some way.

1.3. The Lord, Ross and Lepper Experiment

Another paradigmatic study within social psychology that falls under the label confirmation bias is the one done by Lord, Ross and Lepper. It focused on people who had strong views on either side of the debate about capital punishment. Lord, Ross and Lepper gave them fake studies with mixed conclusions on the effectiveness of capital punishment. The study aimed to see what the effect of the studies on their views would be. In this study, participants who either supported or opposed capital punishment were presented with two fictitious studies. One gave evidence that capital punishment was effective in reducing the number of homicides committed in states that introduced capital punishment. The other gave evidence that homicides actually increased after it was introduced. Afterwards, both the participants' reactions to the studies, as well as their views on capital punishment were examined. Lord, Ross and Lepper found that a phenomenon called belief polarization had occurred – people who had initially supported capital punishment supported it even more strongly, and vice versa. Exposure to the same inconclusive evidence had lead the participants to opposite conclusions – and those conclusions were determined by the views the participants had going into the study. In addition, when evaluating the studies, participants tended to evaluate the studies that supported their conclusions as being better designed, carried out, and more convincing than studies that opposed their pre-existing views. It is worth noting that the participants displayed a tendency to engage carefully with opposing evidence – but only with the intention of criticising it, however unconscious they were that this was their main intention. They may or may not have thought that they were sincerely engaging with the evidence.

Phenomenon 6: Lord, Ross and Lepper found that their participants were much more critical of disconfirming evidence than of confirming evidence, evaluating the experiments that contradicted their views as being more poorly designed and implemented than the studies which confirmed their

beliefs. Participants tended to confirm their initial beliefs, through a focus on why opposing evidence was faulty. They were hyper-critical of opposing evidence, and not critical enough of confirming evidence. This could apply quite easily to the debate between Person A and Person B described above. The Lord, Ross and Lepper study suggests that someone who is sexually prejudiced, for example, is likely to be more critical of any empirical studies or arguments that support the view that homosexuality is not harmful. Someone arguing that homosexuality is fine, on the other hand, is more likely to be very critical of evidence that claims that homosexuality is harmful. I will call this phenomenon hyper-criticality.

Phenomenon 6 is linked to phenomenon 2 (the inability to accept challenges to one's claims) in that it appears to be a way in which phenomenon 2 happens. If we do not question confirming evidence and are very harsh on disconfirming evidence, it is less likely that we are going to be able to give up on our initial hypotheses. That said, phenomenon 6 does seem to be a separate phenomenon. Either can, after all, occur without the other. Our claims can become immune to counter-evidence if we simply never look for disconfirming evidence, and we can be asymmetrically critical of evidence without it leading to the claims in question being entirely unresponsive to evidence.

Phenomenon 7: one of the most interesting elements of Lord, Ross and Lepper's study was the demonstration of belief polarization. Lord, Ross and Lepper found that their participants not only did not change their beliefs in response to disconfirming evidence. They also tended to end up with stronger views at the end of their engagement with the evidence than they had at the beginning of it. It seems as though the fact that they were interpreting the opposing evidence as flawed, was strengthening the participants' own beliefs. It seemed that people were "allowing themselves to be encouraged by patterns of data that they ought to have found troubling."[13] Concerns with disconfirming evidence were being used to justify the views that the evidence opposed – and this is problematic. The Lord, Ross and Lepper study suggests that in the case of Person A and Person B, each participant might end up with polarized beliefs, but there is also a possibility that they will not.

Finally, I think that phenomenon 5, ideé fixe, is also present in the Lord, Ross and Lepper experiment. The participants expected that the evidence would support their initial belief. When it did not they were faced with a choice between re-examining their beliefs and finding ways of describing apparent counter-evidence as still supporting their conclusion. They chose the latter, by holding the disconfirming evidence to be bad. They were presented with contradictory evidence, but held onto their initial belief anyway. I think that ideé fixe is, in a way, the central phenomenon of Lord, Ross and Lepper's experiment, to an even greater extent than it is for the Wason one. I take it that the

[13] Lord, Ross and Lepper, 'Biased Assimilation and Attitude Polarization', p. 2107

point of hyper-criticality is to hold fixed one's initial belief.[14] In the Wason case, I suspect ideé fixe is less pronounced than in the Lord, Ross and Lepper one. Wason's participants held their initial impression steady, and mostly looked for confirming evidence, but their actual engagement with the available evidence was not affected. In the Lord, Ross and Lepper case, hyper-criticality affected not what evidence the participants looked for, but how they actually engaged with that evidence. The Wason case shows a problematic tendency in our ways of going about finding evidence, but the Lord, Ross and Lepper case is in at least one way more worrying – it shows that even when we do have evidence, we might not always engage with it particularly virtuously.[15] Lord, Ross and Lepper are concerned not about the tendency to interpret evidence in the light of previously held beliefs, but in the tendency for that evidence to then be used to back up the beliefs that were causing it to be interpreted in a biased manner in the first place. They base their interpretation of their experiment on a view of human inquiry that gives credit to the need for it to be embedded in the inquirer's view of, and knowledge about, the world. They focus on the way in which people have to make sense of the world from a perspective which by its nature must be influenced by previous knowledge and previous ideas. On this picture, we would need to be aware that we are always bringing a history of learning and understanding to bear on any inquiry we embark on. It is important, however, that we do not let that background of already-held views shape inquiry to the extent where it becomes too rigid to take new information into account, or where it fails to be responsive to evidence that it really should be responding to. This would mean that phenomena 6 and 7, at least, are undesirable. Hyper-criticality means that we are letting our background beliefs take control over our interpretation of evidence to the extent where we cannot properly engage with it. In the Lord, Ross and Lepper study, participants engaged differently with disconfirming studies and confirming studies, even though the studies were designed to be equally convincing. Polarisation is also problematic. Our already-held beliefs must influence how we interpret evidence (though not to the extent that occurs in phenomenon 6), but polarisation indicates that we are letting those initial beliefs dictate completely how we respond to contradictory evidence, and that is problematic.

Lord, Ross and Lepper demonstrate what I take to be a very real problem in inquiry. In order to be effective epistemic agents, we need to have some beliefs about the world. We cannot approach new information about a topic from a completely blank-slate position. If we are to engage with

[14] I do think ideé fixe can occur without hyper-criticality. One can use methods other than hyper-criticality to explain away evidence (for example, saying the experiment was well designed, but that conditions interfered with the results – so, "I met children of gay parents and they were happy, but their grandparents help so much…", for example.

[15] In a later chapter, I do discuss epistemic virtue and how one can see confirmation bias through its lens.

evidence, we need to use the tools[16] and beliefs we already have at our disposal to interpret that evidence. At the same time, this makes us much more likely to engage in the phenomena.

1.4. How do they link up?

Each of these studies is an example of the broad phenomenon of confirmation bias – the tendency to evaluate evidence in such a way that it confirms the views one already has about the topic in question. Each of them, however, pick up on different aspects of both confirmation bias and disconfirmation bias. I suspect that this might be partly a result of the experiments' designs, and partly a result of the topics that were used to test confirmation bias. In the Wason experiment, the evidence was not open to the kind of interpretation that seems necessary for the disconfirmation bias to be fully at play, but gave the participants the task of finding new evidence (whether confirming or disconfirming). The Lord, Ross and Lepper experiment, however, allowed for interpretation of the evidence, but that evidence was provided – the participants did not have a choice about what evidence to look for.

Normative claims play more of a role in Lord, Ross and Lepper's picture than in Wason's. Wason's experiment is to do with testing mathematical hypotheses. It is focused on more scientific or factual beliefs than Lord, Ross and Lepper's. Lord, Ross and Lepper explore the realm of normative and ethical belief, dealing with capital punishment and the moral implications of the death penalty. I do think that Wason's phenomena might have implications for normative beliefs – including ethical beliefs such as the ones that Lord, Ross and Lepper were working with, as well as the kind of sexually prejudiced beliefs that I am interested in. The tendency to seek confirming evidence, for example, has implications for how we might go about the project of forming and/or critically engaging with our ethical beliefs. The possible overlaps are not, however, really relevant to the particular cases I am interested in exploring – cases where people are presented with evidence or argument, and respond to it differently based on whether it supports their existing beliefs or not. The cases I am most interested in are cases where we have beliefs that do not change in the face of counter argument or counter-evidence. Neither Person A and Person B's beliefs, nor the Lord, Ross and Lepper participants' beliefs changed. It is the engagement with evidence that interests me, rather than the tendency to look only for confirming evidence. In the cases I am thinking of, the evidence is already available. It is just that its impact is not being allowed by the agent.

[16] Possibly including heuristics and associations – they are not always justified, but we do need to use them at least to some extent. Navigating the world would be too hard otherwise.

1.5. What does this say about argument and debate?

Given the preceding discussion of confirmation bias, in the form of the phenomena described above, it may be useful to return to the example I gave at the start of this chapter. We need to consider the effect of the phenomena on our debates about ethical issues – debates which have to happen, because these issues affect people's lives. Where there is conflict about ethical issues, people need to talk to each other. If there is to be any kind of constructive progress in areas such as prejudice, discussions need to be opened up and the issues need to be engaged with.

The preceding discussion, however, suggests that there may be challenges to engaging in constructive debate about such issues. When we engage in debates about ethics, we have a tendency to engage in the phenomena described above. This is problematic because it suggests that debates will often end with as much – or more – dissent than they started with. Social psychology suggests that ethical debates are likely to be prone to phenomena 5 and 6 at least, and possibly 7 as well. This applies to debates about the ethical status of homosexuality as well. It is, after all, a topic in a similar vein to discussions about capital punishment, although perhaps one that is relevant to a wider number of people. These three phenomena (ideé fixe, hyper-criticality and polarisation) are the ones that I think have the most interesting effect on the example of debates about homosexuality.

So we go into a debate about homosexuality already convinced that we have the right beliefs. When we are presented with counter-arguments, we tend to engage in hyper-criticality. We are very critical of the alternative position's arguments, and tend to pay much less attention to our own. This does not, of course, mean that it is not the case that one of us has a better view than the other. In cases of prejudice we are certainly going to want to say this is the case, but it is worth noting that either "side" of the debate is equally prone to the phenomena. We argue, each engaging very critically with the other's argument. The sexually prejudiced person, for example, might be very critical of evidence that gay couples raise healthy children. She might argue that the studies are unconvincing or biased from the start. People who are against sexual prejudice, on the other hand, might argue that evidence showing that the children of gay couples are unhappy is a result of societal prejudice rather than bad parenting, and that the studies in question fail to recognise this. We might, when engaging with the other person's evidence engage in ideé fixe – the sexually prejudiced person might, for example, consistently interpret evidence of good parenting skills among gay couples as being the result of particularities of each situation rather than of an ability for childrearing that is able to be shared by parents of any sexuality. At the end of this debate, neither of us is convinced – in fact, it is possible that we might each end up with views that are even more strongly entrenched than they were before.

I think that this is a problem that is wider than just the debate about homosexuality. The phenomena I have been describing are not an isolated fact about some people. I think the experiments I have discussed, as well as some of the other literature on confirmation bias[17], show that they are something that we tend to engage in as epistemic agents. Though I am focusing in this thesis on how these tendencies play out in the particular case of sexually prejudiced beliefs, this is something that I think affects all of us, in various ways. I will explore this more fully in the next chapter, arguing that by virtue of how our belief systems work, we hold beliefs fixed – engage in ideé fixe – relatively frequently. Given the reasons above, which suggest that it is actually the Lord, Ross and Lepper experiment that I am interested in, I will limit myself to discussing those three – ideé fixe, hyper-criticality, and polarisation. Finally, because I think that ideé fixe is the central phenomenon of the Lord, Ross and Lepper experiment, I will be looking at it as the main phenomenon that I am trying to explain, though I will discuss the other two as well.

[17] Nickerson, 'Confirmation Bias: A Ubiquitous Phenomenon in Many Guises.' For examples of the Wason-type experiments, see Levine, M. (1970). Human discrimination learning. The subset-sampling assumption. *Psychological Bulletin, 74,* 397-404.; Millward, R. B., & Spoehr, K. T. (1973). The direct measurement of hypothesis-testing strategies. *Cognitive Psychology, 4,* 1-38.; Tweney, R. D., Doherty, M. E., Worner, W. J., Pliske, D. B., Mynatt, C. R., Gross, K. A., & Arkkelin, D. L. (1980). Strategies of rule discovery in an inference task. *Quarterly Journal of Experimental Psychology, 32,* 109-123.; For the Lord, Ross and Lepper-type experiments, see, for example, Pitz, G. F, Downing, L., & Reinhold, H. (1967). Sequential effects in the revision of subjective probabilities. *Canadian Journal of Psychology, 21,*381-393, as well as literature around Kardash, C.M. and Scholes, R.J. (1996). Effects of preexisting beliefs, epistemological beliefs, and need for cognition on interpretation of controversial issues. *Journal of Educational Psychology, 88(2)* – 260-271.

Chapter 2: The Motivational Story behind the Phenomena

In the previous chapter, I argued that one of the things that might be happening in cases where people are arguing about something like homosexuality, is that each of the participants in the argument may be engaging in confirmation bias. The social psychology experiments on confirmation bias use the term "confirmation bias" as though it were a single thing. I argued, however, that the umbrella term "confirmation bias" actually gets applied to a combination of phenomena, which tend to happen together. Social psychology experiments show two main trends, groupings of phenomena, one exemplified by the Wason experiment, and the other by the Lord, Ross and Lepper experiment. The latter includes the phenomena ideé fixe (holding beliefs steady), hyper-criticality (being over-critical of contrary evidence, and under-critical of supporting evidence) and polarisation (coming to hold a belief more steadily in the face of mixed or contrary evidence). I think that these phenomena are the ones which are most relevant to the kind of beliefs I am interested in – fixed beliefs in a prejudicial context – and so will be focusing on these three in the following chapters.

In this chapter, I will tease out the motivations we have for holding steady certain beliefs. Though I use the term "motivations", and speak about the factors I point to as such, I do not mean that they are conscious. I think the factors that I discuss in this chapter motivate certain responses to evidence, but that they do so unconsciously. They do not lead to intentional choices about what to believe, or what evidence to take on board, but they affect the way we do engage with evidence. It is beyond the scope of this thesis to spell out exactly how beliefs and evidence-responsiveness are affected by motivations on a micro-level – i.e. the actual psychological or neurological path by which the one affects the other. I will, however, discuss the general factors that I think can motivate the phenomena.

Before I discuss the relevant motivating factors, however, I will return briefly to sexual prejudice, and what it might be. In the introduction, I suggested that we tend to think there are roughly two components to prejudice, including sexual prejudice – namely an attitude-based component, and a belief-based component. In this chapter, I will discuss this in more detail, arguing that sexual prejudice can involve either, or both, of these components while still counting as sexual prejudice. The beliefs I am interested in, then, can be present in cases of sexual prejudice which involve only beliefs, and in cases which involve both attitudes and beliefs. It will become clear in the chapter that I think that they are more likely to be found in cases where the person in question has negative attitudes as well as negative beliefs, but this is an empirical question, which I will not go into in any detail. After discussing sexual prejudice, I will argue that the holding steady of sexually prejudiced beliefs is a particular, problematic instantiation of a general tendency. I will argue that this tendency is a result of

how our beliefs fit together with each other, and with our affective and attitudinal aspects. I think that W.V. Quine's picture of belief is a useful tool for understanding ideé fixe and hyper-criticality, but that it does not explain polarisation. I will briefly try to give an alternative account of what might be happening in the case of this phenomenon. Finally, I will argue that, while Quine's picture does make some sense of why we might be motivated to engage in the phenomena, it does not fully capture non-epistemic factors which impact on them – namely emotions, attitudes, and values. I will explore how they might have an effect on the beliefs I am interested in, and thus how they relate to the phenomena.

2.1. What is sexual prejudice?

When one thinks about prejudice in general and sexual prejudice more specifically, there are two things which might come to mind. I think that there are two different possible elements of sexual prejudice – beliefs and attitudes. In terms of beliefs, if I am prejudiced, I might have beliefs about the superiority of one group and/or the inferiority of another. If I am racist, I probably believe certain things to do with the intelligence or moral standing of certain racial groups. If I am sexually prejudiced, I might have beliefs about the moral status of homosexual people, or the impact on children that same-sex parenting has. In terms of attitudes, if I am prejudiced, it is likely that I have negative attitudes towards people of the group I am prejudiced against. These may be strong – hatred, for example, or disgust – but they may also be more subtle and less extreme – I may simply be uncomfortable around members of that group.

Beliefs are, I take it, just propositions that one holds to be true. Attitudes are more difficult to get a grip on. An attitude towards something can best be described as a disposition to act and feel in certain ways and believe certain things. So "[a] person with a certain attitude toward something S (a particular or kind of object, property or event) will be, among other things, *attentive to certain features* of S, *inclined to describe or understand* S in certain ways, disposed to feel certain *emotions* toward S, disposed to certain *beliefs* toward S, disposed to *praise* or *blame* S in certain conditions, and disposed to *act* in certain ways toward S."[18] If I have respectful, trusting and friendly attitudes towards someone, for example, I will be disposed to believe the best of them, to feel sad or angry if they are harmed, to expect them to have my interests in mind to some extent, etc.

I will argue that it is possible for each of these elements to occur within sexual prejudice without the other – so someone might have sexually prejudiced beliefs – a sexually prejudiced ideology – but no negative attitudes, or vice versa. Often, though, they occur together – people often

[18] Jones, W, 'Philosophy and the Ethical Significance of Spectatorship: An Introduction to *Ethics at the Cinema*' in Jones and Vice, (Ed.) *Ethics at the Cinema*, p. 4

have sexually prejudiced ideologies, as well as negative attitudes towards LGBTIAQ people. There are thus three types of sexual prejudice, depending on which of the components are present: ideology-based sexual prejudice, attitude-based sexual prejudice, and mixed sexual prejudice.

These two components have been explored, both with regard to sexism, and with regard to racism. The literature on racism is, I think, particularly useful for thinking about sexual prejudice.

J.L.A. Garcia, in 'The Heart of Racism' argues for the view that racism should be seen primarily as a matter of bad attitudes towards people or groups based on their racial classification. He sees racism as "...fundamentally a vicious kind of racially based disregard for the welfare of certain people."[19] Racism, on this view, can be a matter of hatred – of active disaffection. It can also be less extreme in that it can be a matter of not caring, nor caring enough, or caring in the wrong ways for the welfare of others based on their racial classification. This is morally wrong in two ways. Firstly, it is non-benevolent – it involves failing to care for people as one should (or actively wishing harm on them, in more extreme cases). It is also unjust – it involves not according people the respect they deserve as people. Beliefs, on Garcia's view, are not the core of racism – attitudes are.

Tommie Shelby in 'Is Racism in the "Heart"?' – his response to Garcia – pays more attention to the link between beliefs and attitude, but still does not focus on the relationship as such. He argues that, while attitudes might often be involved in cases of racism, it is ideologies – "widely accepted illusory systems of belief that function to establish or reinforce structures of social oppression,"[20] – which are the essential factor which decides whether something is an instance of racism or not. Shelby argues that we cannot have access to whether or not a negative attitude on the part of Person A towards Person B is actually a result of the other's race and not another feature without ascribing at least one negative belief to Person A. Unless we know something of Person A's beliefs, we cannot be sure that it is racism and not simply a dislike of Person B for individual reasons that constitutes Person A's attitude towards Person B. As Shelby puts it

> If all we know, say, is that Stephen (a white person) dislikes Andre (a black person), then we don't yet know whether Stephen's dislike for Andre is racist. To settle that, we also need to know *why* he dislikes him. If it is simply because Andre is having a love affair with the woman Stephen loves (who, let us say, happens to be white), then this is not racist, provided Andre's "race" is not an aggravating factor. In order for his dislike to be racist, it would have to be based at least in part on the fact that Andre is a member of the "black race," where Andre's "blackness" (at least partially) grounds Stephen's dislike. Thus, if Stephen's dislike of Andre is racist, this has to be (at least in

[19] Garcia, 'The Heart of Racism', p. 259
[20] Shelby, 'Is Racism in the Heart?', p. 415

part) because of Stephen's beliefs about the racial characteristics of black people and the role that these beliefs play in his motivation, speech, and conduct.[21]

It is Person A's beliefs, rather than her attitudes, which decide whether she is racist or not.

I think that in the case of sexual prejudice, neither Garcia nor Shelby is entirely wrong. Shelby's criticism of Garcia, their essential disagreement, is about whether it is attitudes or beliefs that form the essence of prejudice. Based on both a common-sense understanding of sexual prejudice, and on the literature, however, it seems clear that both attitudes and beliefs – ideologies – can qualify as sexual prejudice. Furthermore, they can each exist without the other to at least some extent.

I do think that in cases of prejudice which are primarily attitude-based, the person must at least have one or two basic beliefs. Shelby argues that we cannot make sense of a negative attitude being prejudiced unless we can attribute some kind of negative belief to the person with the attitude. I think Shelby might be right about this in the sense that saying someone has a prejudiced attitude might necessitate saying they at least believe that the person they have a negative attitude towards is a member of the group in question. For Person A's negative attitude towards Person B to count as sexual prejudice, Person A has to believe that Person B is homosexual, and have the negative attitude be associated with that belief. The attitudes are, however, still the central factor here. I think in the case of people who respond with disgust to homosexuality, this might sometimes be the case. Someone might believe that Person B is homosexual and be disgusted by the idea, without any real beliefs about homosexuality being wrong. There is a belief in this case, but the belief is not in itself prejudicial – it is the attitude component that makes it prejudicial. This is still prejudice, because it is a negative response to someone based on their membership within a certain group.

Sexually prejudicial attitudes, then, can exist without any substantial negative beliefs about homosexuality. I think that negative ideologies can also exist without attitudes we would normally label prejudicial. There may be attitudes attached to these beliefs, but they may not necessarily be ones we traditionally associate with sexual prejudice. One could believe that homosexuality is immoral, and that all gay people are going to hell for it, and feel pity rather than hatred, for example. I think this would still be regarded as prejudice because of the condemnatory nature of the belief that homosexuality is immoral, or that it is worthy of hell. Prejudicial beliefs seem to be able to exist without prejudicial attitudes, and vice versa.

[21] Shelby, 'Is Racism in the Heart?', p. 414

i. Gender Identity-threat: A Third Component?

Interestingly, heterosexual men are more likely than heterosexual women to be sexually prejudiced. They are also more likely to be prejudiced against gay or bisexual men than lesbian or bisexual women.[22] Falomir-Pichastor and Mugny suggest that one reason that this might be the case is that men's gender esteem is tied up in their difference from homosexual men, and it is particularly when they feel that their identity as heterosexual men, and the related esteem, is threatened, that sexual prejudice rears its head. So

> [W]hen bogus feedback to heterosexual men portrayed them as scoring lower than the average on a masculinity scale, they behaved more aggressively against a homosexual partner, as compared to a heterosexual partner, during an interactive learning task... These findings…suggest that sexual prejudice may accomplish the defensive function of maintaining a positive and distinctive gender identity…: Men would be more rejecting of homosexuals in order to fulfill their need to affirm their masculinity by distancing themselves from those with whom they do not want to be confused. Indeed, sexual prejudice is related to a greater perceived dissimilarity between the self and homosexuals, a pattern observed specifically for heterosexual men... Considering psychological distancing as a consequence of perceived threat to identity …overall these findings provide support for the hypothesis that heterosexual men's sexual prejudice is related to a threat to their gender identity.[23]

According to social identity theory, our identities are partially constituted of the in-groups we belong to – "group members derive their self-esteem from their group membership and are motivated to achieve a positive and distinctive social identity by comparing their ingroup to relevant outgroups."[24] It seems, then, that expressions of sexual prejudice can be a way for heterosexual men in particular to illustrate their difference from homosexual men, by enacting gender roles traditionally associated with masculinity.

Falomir-Pichastor and Mugny argue that men are more expected than women to conform to gender norms. This is problematic, but enlightening. The gender norms men are expected to conform to involve violence and aggression, being "strong" while women's involve care. Trying to act out or

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[22] Falomir-Pichastor and Mugny, '"I'm not gay…I'm a real man!": Heterosexual Men's Gender Self-Esteem and Sexual Prejudice' and Ratcliff, Lassiter, Markman and Snyder, 'Gender Differences in Attitudes Towards Gay men and Lesbians: The Role of Motivation to Respond Without Prejudice.'

[23] Falomir-Pichastor and Mugny, '"I'm not gay…I'm a real man!": Heterosexual Men's Gender Self-Esteem and Sexual Prejudice', p. 2

[24] [24] Falomir-Pichastor and Mugny, '"I'm not gay…I'm a real man!": Heterosexual Men's Gender Self-Esteem and Sexual Prejudice', p. 2

emphasise the former more visibly is obviously more likely to lead to violence than trying to act out or emphasise the latter.

The question of exactly how responding in a non-sexually prejudiced way to homosexuality would threaten the gender esteem or gender identity of heterosexual men at all is made clearer if one considers what Kroeper, Sanchez and Himmelstein label precarious manhood. This view holds that manhood is something that has to be earned, enacted, and reinforced, it is not something which one automatically possesses by being an adult male. If one holds such a view, it is relatively easy to see how being positive towards homosexuals – who are stereotyped as being effeminate, though this is often not the case – might be seen as failing to enact, and thus possess, one's masculine identity.[25] According to Kroeper, Sanchez and Himmelstein, the tendency to re-affirm one's own gender-identity by expressions of stereotypically masculine behaviour is much more pronounced in heterosexual men who endorse precarious manhood.

One might think that the identity-threat view of homosexuality comprises another component of sexual prejudice altogether. I think, however, that the identity-threat view of sexual prejudice is rather one possible way that someone might be motivated to form and/or express negative ideologies and/or attitudes about members of the LGBTIAQ community. So one develops negative beliefs and/or attitudes as a way of protecting one's gender identity and gender esteem. The identity-threat is thus not a component of sexual prejudice, but a motivation to develop it.

One possibility, which Kroeper, Sanchez and Himmelstein suggest, is that the identity-threat posed by expressing positive or even neutral attitudes towards homosexuality might cause people who are not themselves sexually prejudiced (in the sense of having negative beliefs or attitudes about the LGBTIAQ community) to express sexual prejudice to ensure that those around them do not see them as being less masculine. I am not sure whether this counts as sexual prejudice or not. I am rather inclined to think not. In addition, given that this kind of expression of prejudice is going to be dependent on people around one being sexually prejudiced, and that my ultimate aim is to do with targeting sexual prejudice that is in some way resistant to argument, I do not think that expressed but not held sexual prejudice is really going to be relevant to my thesis. [26]

[25] Kroeper, Sanchez and Himmelstein, 'Heterosexual Men's Confrontation of Sexual Prejudice: The Role of Precarious Manhood', p. 2

[26] I am looking at this as a motivation for developing sexual prejudice. It has implications for why we might be motivated to hold steady sexual prejudice, but I will not discuss this in the chapter on motivation. It is a complex subject, and I do not have the space to do it justice.

ii. What's the point?

It seems to me that there are two elements of sexual prejudice, which sometimes occur together and sometimes apart. There is the more belief-based kind of sexual prejudice, where people have factual and/or normative beliefs about the status of homosexuality and homosexual people. There is also a kind of sexual prejudice is more to do with attitudes than beliefs. This might take the form of hatred, or disgust. There might also be beliefs involved in this kind of sexual prejudice in the sense that in order to justify hatred one might need to have rationalising beliefs about homosexual people, but the attitudes are the driving force behind the sexual prejudice in this case. I think often there are going to be both attitudes and beliefs involved in sexual prejudice, but each is sufficient for sexual prejudice on its own. I have argued that neither is necessarily prior in the sense that something would not count as an instance of prejudice were it not to involve that particular component. In this thesis, I am primarily interested in the kind of sexual prejudice which involves both attitudes and beliefs. Having discussed in more detail what I think might be entailed in sexual prejudice, I will move on to talking about the kind of motivations that we might have for the phenomena, using sexual prejudice as an example. Again, when I speak of motivations, I do not mean conscious ones. We do not, I think, consciously choose to engage in the phenomena. Nor, more subtly, do we choose to prefer one belief over another for non-evidential reasons. Rather, there are factors which affect us unconsciously. I have called them motivations because they are factors which play a motivating role when it comes to the functioning of our beliefs. I speak about motivations as though there are choices being made, because in a sense there are – but they are not conscious. I speak later about why I think that they cannot be so.

2.2. What kind of causal story could we tell?

The phenomena described above can be seen clearly in the experiments that have been done. How they come about, however, is more mysterious. It seems to me that Quine's picture of beliefs is very useful here. The claim that Quine makes which is most relevant to the phenomena I have tried to isolate – his main lesson, if you will – is the claim that our beliefs form a web, which we try to avoid re-arranging as much as possible. This claim gives us the start of an explanation of why we might be motivated to engage in the phenomena described above. I will argue, however, that Quine's picture only goes part of the way to explaining what is happening in situations such as the one Person A and Person B find themselves in.

Quine develops an account of human belief that sees our beliefs as a web, which is only partly based on experience. So "[t]he totality of our so-called knowledge or beliefs...is a man-made fabric

which impinges on experience only along the edges."[27] On this view, beliefs near the centre of that web are more strongly held and difficult to give up on (for example beliefs that were previously thought of as analytic beliefs, and may now be thought of as a priori beliefs, such as 2+2=4)[28]. Beliefs that are nearer the edges, on the other hand, are less strongly held and easier to give up on. Observational beliefs such as "it is raining outside" would be peripheral in this way – if I look outside and it is not raining, I will change my belief that it is. Importantly, the beliefs in the web are all interconnected. Our beliefs cannot be completely isolated from each other. As a very basic example, my beliefs about how healthy certain foods are have an impact on my beliefs about what I ought to eat regularly.

This view of belief allows for certain statements to be held true no matter what, provided that one makes adjustments to the rest of the web. Similarly, each statement *can* be open to change. So it is possible to hold statements near the perimeter of the web steady in the face of contradictory evidence. I could, for example say that the evidence was hallucinated. It is also possible to change beliefs near the centre (for example giving up on the universality of Newtonian physics).[29] This would only happen in special circumstances, however. Generally, what it means to say that a belief is in the centre of the web is that we are less likely to give that belief up in the face of contradictory observational evidence. So if I put two pairs of socks in the washing machine, and only three come back out, I am likely to try and re-arrange my observational beliefs and not my mathematical belief that 2+2=4. This is not always the case, however. Sometimes we will stick with observation over previous beliefs. This might be the case when the beliefs are not very central, or when we have to give up on central beliefs because there are simply too many observational inconsistencies that cannot be explained or dismissed without giving up on those beliefs.

In addition to avoiding making re-arrangements to our central beliefs, we tend (and this is what I am referring to as Quine's main lesson) to try and avoid re-arranging our beliefs as much as possible. The interconnectedness of beliefs means, after all, that giving up on one belief inevitably will have repercussions for other beliefs, though to varying extents. One might wonder why we should actually believe that we do this. I think that there are examples that show this to be the case. When we think about why we more easily give up on some beliefs than others, the answer does seem to have to do with how much giving up that belief would impact the rest of our belief systems. Giving up on the belief that 2+2=4 would have drastic consequences for the rest of my belief system. My understanding of the number system – something that affects a great many of our beliefs (think of our whole economic system, for example) – would have to change. It is easier to give up on the belief

[27] Quine, 'Two Dogmas of Empiricism', p. 39
[28] This paper is to do with the analytic/synthetic distinction, but Quine's picture of belief has a rather wider application. Beliefs near the center would not necessarily have to be analytic.
[29] Quine, 'Two Dogmas of Empiricism', p. 40

that I put two full pairs of socks in the washing machine (a belief which affects very few other beliefs in any significant way) than give up on 2+2=4. Intuitively, the best explanation for the tendency to give up on some beliefs rather than others is related to how much those beliefs would affect the rest of my beliefs.

This view of belief is taken from Quine. I think that he is roughly right about these elements. I may, however, draw different conclusions from Quine, or nuance the view in a way that he would not approve of. If that is the case, then I am happy to say that I am using a Quinean picture of belief, rather than Quine's picture of belief. What I have just described is, however, the core of his view, and I think it is largely right.

One of the things we could say about Person A and Person B above is that they have beliefs which are central. The belief "homosexuality is wrong" is connected to many other beliefs, and can also affect how we engage with other beliefs. This overarching belief is tied to beliefs about gay marriage, about who should be allowed to adopt children, about the ethical climate of one's country, about how to treat certain people. It also has implications for how we judge other beliefs. So the new belief "Mark has started dating Jake" might have different evaluative judgements attached to it, depending on whether the person holding that new belief believes that homosexuality is wrong or not. Of course, the fact that this overarching belief behaves in this way does not necessarily mean that everyone who believes that homosexuality is wrong will treat LGBTIAQ people badly. Nonetheless, there are likely to be implications for behaviour, even if they are relatively positive. Someone might pray for their LGBTIAQ friends, or try to persuade them to go to church. They may treat them with sympathy rather than anger or disgust. The beliefs about what behaviour is necessary or appropriate are still linked in with the view that homosexuality is something problematic. It is this interconnectedness, and the ability to affect other beliefs, that makes this belief central.

Quine never specifically talks about evaluative beliefs. His web of belief is set up to account for the perceived difference between scientific beliefs and beliefs traditionally thought of as analytic – mathematical beliefs, for example. One might wonder whether evaluative beliefs, such as those about homosexuality, belong in Quine's web at all. It seems rather strange to me, though, to leave evaluative beliefs out of the web. It makes little sense to come up with an account of scientific belief that does not connect with normative beliefs. It seems very unlikely that half of our beliefs would be interconnected with each other, but not with the other half. Furthermore, beliefs Quine does include in the belief web – truths that are traditionally seen as analytic – are not necessarily scientific. Maths is included, yes, but logical truths – like the principle of non-contradiction – would be too, and it is not clear that these are scientific.

It is clear that normative beliefs and factual beliefs are interconnected in the way Quine describes. Studies that show that gay couples raise healthy children – a factual claim – have direct bearing on whether or not homosexuality is ethically problematic. Of course, this would not be relevant to all sexually prejudiced beliefs, but I think it will be true of enough to be something to consider. If gay couples do raise healthy children, the normative claim that homosexuality is wrong is undercut. It would be problematic to keep believing that homosexuality is wrong *because* it causes harm to children in the face of contradictory evidence. The evidential claims made about actual same-sex parent families and normative claims about the ethical status of homosexuality with regard to its effect on children are linked. This is again simply one example of a factual belief that has an impact on views the sexually prejudiced person might have. Not every sexually prejudiced person's beliefs are going to take this form, but I think it is often going to be the case that some factual questions are going to be related to people's beliefs about homosexuality – whether those factual beliefs are about the parenting skills of LGBTIAQ people or not. In the argument between Person A and Person B above, each has beliefs about matters of fact – gay couples are, or are not, more likely to be unhappy, other animals show homosexuality etc. – and these beliefs are tied in with normative claims about homosexuality.

Though I have argued that normative beliefs are connected to factual ones, I still need to explain how they connect to experience. Some of the beliefs within Quine's web are more closely related to experience and observation than others. The central beliefs, which are further away from experience, are still connected, though at various distances, to the beliefs at the periphery. It seems to me that evaluative beliefs are often of this kind. They are usually connected to matters of fact in some way, as I have just argued, but observation does not generally cause us to give up on them. Nonetheless, enough evidence that, say, homosexuality is not harmful, but sexual prejudice is, might eventually cause someone to give up on that evaluative belief. Similarly, I will argue later in this chapter that enough evidence can eventually cause us to give up on, or at least nuance, other central beliefs, even mathematical ones. It is far more difficult, however, for evidence to cause us to give up on more central beliefs – like mathematical ones or evaluative ones – than is the case for peripheral beliefs. Evaluative beliefs are not as central as mathematical ones, but it makes sense to fit them into a fairly central place on the belief-web.

Quine's own view, while dealing with scientific beliefs, gives us some reason to think that it would at least not be incompatible with his view to think that normative beliefs must be part of the same web as scientific ones. On Quine's account, the analytic/synthetic distinction falls away, as does the a priori/a posteriori one. He argues – I think successfully – in his paper 'Two Dogmas of Empiricism' that there is no difference in kind between analytic truths such as mathematical truths and synthetic

truths based on observation.[30] Any belief can, on this account, "face the tribunal of observation."[31] While he is still talking mostly about mathematical/logical and scientific beliefs, his distrust of the idea that beliefs are of different kinds suggests at the very least that the picture is open to beliefs being part of the same web, even if we would normally see them as being different in kind.

A combination of the strangeness of having a web of belief that excludes some beliefs, the links between evaluative and factual beliefs, and Quine's own distrust of separating out different kinds of beliefs, inclines me to think that evaluative beliefs ought to be part of the web. Quine did not intend this, as far as I can tell, but these factors seem to me to outweigh this fact. I am not wedded to Quine's entire view. I am using the central part of his picture of belief, but I am setting up a Quinean picture, rather than directly applying Quine's view, as is, to the phenomena I am trying to explain.

It seems, then, that Quine's view of belief can be applied to at least some cases of sexual prejudice. His account is not uncontroversial, however. There are several possible objections which one might consider against this view. One might argue that the reason that we do not give up on the belief that 2+2=4 in response to evidence is not that it is central, but that it is a priori. The set of beliefs that Quine calls central – the ones that are the most central, on his view – are usually ones which are traditionally seen as analytic, and/or a priori. If mathematical knowledge is a priori, after all, then we cannot expect evidence to have any effect on it, because the knowledge is outside the domain of evidence. I know that 2+2=4 in such a way that no experience could change it. I think, however, that the development of Non-Euclidean geometry suggests that this is false.

Any mathematical system has to be built on a set of assumptions. Euclid was the first to fully recognise and make use of this. He developed twenty-three definitions of concepts such as lines and points, as well as the basic assumptions on which our everyday, high-school geometry is based. Euclid's five principles seem to me to be a priori truths, as are his definitions and postulates. Something like "[p]arallel straight lines are straight lines which, being in the same plane and being produced indefinitely in both directions, do not meet one another in either direction,"[32] or "[t]hings which are equal to the same thing are also equal to each other"[33] seem to me to be paradigmatic instances of what are generally seen as a priori truths. As it turns out, however, we[34] can set up a geometry that has different definitions and starting assumptions, and still does not lead to contradictions later on. There are two different kinds of Non-Euclidean geometry – spherical and

[30] Quine, 'Two Dogmas of Empiricism'.
[31] Quine and Ullian, 'The Web of Belief', p. 13
[32] Wolfe, *Introduction to Non-Euclidean Geometry*, p.3
[33] Wolfe, *Introduction to Non-Euclidean Geometry*, p.4
[34] Well, probably not me. But people who are far better at Maths than I am can and have.

hyperbolic.[35] Spherical geometry works – as the name would suggest – on the surface of a sphere. Hyperbolic geometry works in curved space.

The ability to set up an alternate geometry that does not lead to contradictions is impressive enough, but non-Euclidean geometries also have another point in their favour. Despite the a priori nature of mathematical truth, one of its features is that it describes the world. This is part of why it helps us make sense of physics, and fly rocket ships to the moon. It is a way of describing relationships in the world. Euclidean geometry describes the world as it functions on the level of macro-experience – the level explained by the Newtonian world picture. It describes the space we encounter in everyday life. Hyperbolic geometry, however, is used in work on special relativity, and spherical geometry is used, for example, to describe the Earth. Both kinds of non-Euclidean geometry better describe the way the world works under different circumstances.[36]

The point of this example is to argue that it is in principle possible even for mathematical beliefs to be refined. Arguing that some beliefs do not change because they are a priori – a different kind of belief – would not be enough to challenge Quine's picture of centrality as being the important feature in a case where we do not give up a belief in response to observational evidence. The objection that these beliefs are a priori does not hold. Non-Euclidean geometry does not overwrite Euclidean geometry, but it does cause us to make changes to our basic beliefs about geometry. This suggests that it is possible to change even mathematical beliefs under the right circumstances, which lends at least some support to Quine's picture that there is no real difference between a priori and a posteriori (or analytic and synthetic) beliefs.

In his paper, 'Two Dogmas Revisited', Quine claims that we choose not to revoke mathematical claims not because they are analytic, but because "such a move would reverberate excessively through the rest of science."[37] This leaves room for a picture of belief and belief webs that suggests that how close a belief is to the centre of the belief web is simply a matter of how strongly it ties in with other beliefs, and how many other beliefs it ties in to. As we build up pictures of the world, we begin to see connections between beliefs, we begin to form unconscious associations between beliefs. We both consciously and unconsciously try to tie our beliefs together into a coherent whole – and so we form a belief web.[38]

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[35] Krioukov, Papadopoulos, Kitsak, Vahdat, and Boguñá, 'Hyperbolic Geometry of Complex Networks', p. 2

[36] Wolfe, *Introduction to Non-Euclidean Geometry,* Krioukov *et al*, 'Hyperbolic Geometry of Complex Networks'.

[37] Quine, 'Two Dogmas Revisited, p. 270

[38] Something that it is worthwhile to consider is that people sometimes have contradictions within their belief-webs. I think it must be the case that we cannot consciously do this. There is a school of philosophers who believe that we ought to embrace contradictions, but I do not have the space to engage with this here. I am going to take it as fairly uncontroversial that we cannot consciously and rationally believe contradictions. The beliefs in our belief webs are connected by what we take to be logical and/or evidential links. We cannot

There may be concern that Quine's picture of belief does not allow for change – that if Quine is right our central beliefs actually cannot change. This does not follow from Quine's view. I take it that the core of Quine's picture is that our beliefs are interconnected, that these connections mean that changing one belief might entail changing others, and that we can hold beliefs steady or change them by manipulating the rest of our belief-web. This does not mean that we cannot change beliefs – in fact, he explicitly states that we can – and it does not yet say anything about when we ought to hold beliefs steady, and when we ought to change them. Quine allows for changes to be made to belief webs in response to evidence, but I also think he allows the possibility that we can change beliefs in response to argument. Argument can, and often does, include evidence, but it can also take the form of setting a position out in such a way that its contradictions become apparent. If I argue that the view that one ought to love thy neighbour is inconsistent with the view that we should deny LGBTIAQ people rights based on their sexual orientation and/or gender identity, I am trying to change someone's mind with argument, not necessarily with factual evidence.[39] The person who is persuaded by a teacher or friend that karate is a better sport for them than tennis because it requires less equipment, is not dependent on the weather, and gives them self-defence skills as well as fitness has formed or changed a belief in response to argument – and there is nothing in Quine that does not allow for this. As a matter of fact we sometimes do not change our beliefs in response to evidence or argument, and Quine describes this fact – but that is a property of us, which Quine's picture explains, not a fault in Quine's picture. If I am giving Quine too much credit, then I am happy to accept that this is one of the points at which Quine's view and mine diverge.

2.3. Quine and the phenomena.

Quine makes some sort of sense of ideé fixe. If a belief is central, then we are likely to re-arrange or reject other, more peripheral, beliefs rather than the centrally held belief. So, for example, the sexually prejudiced person might be motivated to hold on to the belief that gay people are harmful to children

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consciously have links between beliefs that flout the laws of logic. What we might be able to do, however, is come up with a rationalising story that masks the contradiction to us – i.e., we can form another belief in order to make the two beliefs compatible. It is possible, I would imagine, to have two beliefs that seem incompatible or contradictory on the surface, but actually are not. Nonetheless, I think it is also possible to come up with beliefs that make incompatible or contradictory beliefs seem compatible. I take it that it not just something about our psychology that makes us unable to hold contradictory beliefs consciously. There is something in fact problematic about that – namely that if two beliefs are genuinely contradictory, they cannot both be right. I am interested, however, in what happens when we do hold contradictory beliefs, and manage to cover up that fact to ourselves.

[39] It may be a fact that the argument is good, or a fact that love and the denial of rights is inconsistent, but that is different to saying that the argument is based on factual evidence. It is based on logical relations between beliefs, which can, but need not, include factual ones.

they raise, even in the face of counter-evidence or counter-argument. Giving up on that belief would have implications for other beliefs. It might have an impact on beliefs about gay marriage, for example, or about the moral permissibility of homosexuality in general. The belief that gay parents are bad for the children they raise would presumably count as evidence that homosexuality is wrong. If this belief is given up on, it seems that it should at least cause the believer to question the overarching belief again. Avoiding giving up on this belief, then, means that the person would not have to re-arrange or re-open the question of other beliefs that are linked to the first one. While the sexually prejudiced person might be aware of the fact that she does not want to give up on the belief, she is likely to still believe that she has good epistemic reason to hold on to the belief – she cannot consciously think that she is only holding onto it because she wants to. As a result of this kind of motivating concern, we re-arrange evidence that contradicts central beliefs, rather than giving up on or re-arranging the beliefs themselves. We are thus motivated to engage in this phenomenon, because holding beliefs that we already have steady means that we will avoid having to make changes elsewhere in the web. This account seems to suggest that mathematical beliefs are also subject to ideé fixe. After all, they remain steady in the face of counter-evidence as well. I think that this does not necessarily follow. Saying that the centrality of beliefs is part of what might cause a problematic phenomenon does not necessarily entail that all central beliefs are necessarily prone to that phenomenon. In the next two chapters of this thesis, I will touch on what I think the differences between beliefs such as 2+2=4 and sexually prejudiced beliefs are, despite the fact that they both have a tendency to remain steady.

Quine's structure also goes some way to making sense of phenomenon 6 – being hyper-critical of disconfirming evidence. Firstly, if we are motivated to engage in ideé fixe, and hyper-criticality is one way of going about ideé fixe, then we have some reason to engage in hyper-criticality. I think Quine's picture can explain more than this, though. Simply put, I think the set of beliefs that we already have is going to have an impact on whether we see a particular piece of evidence as good or not. As Lord, Ross and Lepper point out, we do not approach inquiry from a blank-slate kind of position. The web of beliefs we already have is going to be the starting point of any inquiry. What we strongly believe to be true is going to affect what else we can accept – and this may well lead us to interpret evidence in such a way that we are not confronted with effective challenges to our central beliefs. In fact, the way this picture is built up is going to have an impact on what we take to be evidence at all. So we are going to tend to be more critical of disconfirming evidence than confirming evidence, because the belief we hold at the start of the inquiry is linked to other beliefs, which influence how we read and interpret evidence. I, for example believe that homosexuality is perfectly fine, and that belief ties in strongly with other ethical beliefs, as well as factual beliefs. It ties in with the belief that it is wrong to hate people, blaming people for something that is not their choice is wrong, discrimination is bad, gay

people do not raise unhappy children, it is not inherently more likely that gay couples will be unfaithful to each other etc. Those beliefs lead me to interpret evidence in a certain way. So if someone presents a study to me that claims to show that a greater number of children raised by gay couples experience social anxiety later in life, I am likely to resist it in any way I can. I will not want to accept it because that would challenge beliefs which might have quite severe repercussions for my web if I were to change it, given that the belief is knotted in with so many others. I want to avoid this kind of change, and it is easier to give up on the belief that the evidence is good than to give up on my centrally held belief. Again, I must believe that I am holding onto the belief for good reason. Nonetheless, the desire is affecting my response to the evidence.

2.4. What does Quine fail to make sense of?

2.3.1 Phenomenon 7: Polarisation

Quine's account of belief is useful for explaining the motivation we might have for engaging in phenomena 5 and 6. Phenomenon 7 (polarisation), however, is harder for him to account for. Quine's account gives us reason to engage in the other phenomena to at least some extent. Just wanting to hold certain beliefs steady, however, does not explain why we might engage in a process which leads us to hold them more strongly after a debate than we did going in. We have reason, on Quine's account, to have the same beliefs coming out as we did going in, but not to hold them even more strongly.

In fact, this phenomenon is difficult to explain in any kind of rational way. I am guessing that this is actually a fairly irrational reaction. It does seem, though, that it might be partly a result of a particular way of seeing arguments and debates – their purposes and their structure. What seems to be going on here is that we are perceiving the evidence against our position as weak (due to hyper-criticality), and seeing this as support for our own position rather than simply a lack of support for an opposing one. To be sure, if all the evidence for an opposing position is weak, it is an indication that one's own position is more likely to be a good one – but it is not positive evidence for one's position. It should not make one hold one's own position more strongly, though if one is right that the evidence for the opposing position is weak, it should make one more reluctant to hold the opposing belief. As it happens, however, because I perceive the evidence against my position as bad, the connections between my evidence and my beliefs get stronger, and the two start backing each other up to an even greater extent. This is not going to be a rational move. It rather strikes me as a kind of fallacy.

2.3.2. The Battlefield View of Argument

I would suggest that the whole way we tend to approach arguments in the sphere of ethics, norms, and social discussions is problematic from the beginning. We tend to see arguments as a kind of battle. My argument makes up my army, your argument makes up yours. We sally forth, waving reason like a broadsword and do our best to beat the other person around the head with it. This seems decidedly counterproductive.

To take this attitude towards debate seems to involve seeing the other person as an opponent. It takes the starting point (though to greater or lesser extents depending on the person and argument) that I am right, and the other person wrong. Furthermore, if I lose the argument, and it proves to be the other way around, I have failed in some way. This might not always be important to us, but in the cases I am interested in – cases of ethics – it usually is. It matters to us that we are right about ethics – and if we see argument as a battleground, it becomes a battle for who has the best ethical views. This already gives us reason to try as hard as we can to win, because we want to believe that we are ethical – and thus that we have good ethical views. As we become more focused on winning the argument (bearing in mind that we do think we are right), we start to lose track of any co-operative nature that argument might be able to have.

It seems to me that seeing debate and argument as a battleground is unproductive. There should be something co-operative about argument, particularly in the realm of ethics. When we are arguing about ethics, we are not just trying to prove each other wrong – or at least we should not be. We are trying to find better ways of living together, and coping with the world, particularly the social world. We are trying to get the world right, whether in an ethical sense, or in the sense of having true beliefs about the world or both.

The battlefield analogy goes some way to explaining the phenomenon of polarisation. It is partly irrational, but the urge to hold onto one's original position is heightened by the tendency to think that if we change our minds, if our own views prove wrong or less helpful than our "opponents'", then we have lost. Changing our minds becomes a defeat – a sign that we were wrong, which instead of just involving the admission that our previous way of looking at the world was not the best way, also reflects on our abilities somehow. Seeing argument as a battlefield also seems to underlie phenomenon 6 (hyper-criticality) to some extent. That we want to win the argument makes us more likely to engage critically with disconfirming but not confirming evidence.

Given that polarisation seems to be working in a slightly different way to hyper-criticality and ideé fixe, my focus will shift slightly in the rest of this thesis. I will be talking slightly more about the first two phenomena. I will, however, still refer to polarisation, rather than cutting it out as I did with Wason's phenomena, as the picture I will set out is still largely relevant to it.

2.5. Is there anything left over?

I argued that our beliefs form a Quinean belief web. Some of these beliefs, by virtue of being connected to others, are central, and hard to give up on. The more interconnected a belief is – the more beliefs it is connected to, and the stronger those connections are – the more central it is. The centrality of a belief gives us one motivation for holding that belief steady. Giving up on a central belief would involve re-arranging our belief webs, and probably giving up on other beliefs, and we do not want to do this. I think, though, that Quine's picture still does not fully capture what is happening when we are engaging in ideé fixe and hyper-criticality. Centrality is to do with the evidential links between beliefs, links of reason. Beliefs do not, however, only affect other beliefs, nor are they only affected by other beliefs. We would like to believe that our beliefs are affected only by evidence, that they are truth directed, but there are other factors which influence what we believe. The person who refuses to believe that their spouse is having an affair, for example, is having their beliefs be affected by their desires. I think it would be a mistake in a case like this to think that it is just the fact that the belief "my spouse is faithful" is connected to other beliefs that makes the believer here unwilling to give up on the belief. I think it is unlikely that this is a conscious process – we cannot consciously choose to believe for non-evidential reasons. Nonetheless, I think it is likely that the importance of certain beliefs to us can affect how strongly we hold them, and whether we are likely to engage in strategies such as hyper-criticality to maintain them in the face of counter-evidence. It is this influence, the role of non-evidential factors, which Quine fails to capture.

In the Lord, Ross and Lepper experiment, for example, it matters that the belief was an ethical one. It matters that the topic was capital punishment – something the participants felt strongly about. In the following section, I will try and tease out what the character of the "feeling strongly" might be, and what role it might play in causing us to hold some beliefs steady.

I think that there are three different factors that influence the importance of a belief.[40] The first is that there are emotional or affective aspects playing a role in holding that belief steady. The second is that the agent has certain attitudes which are impacting on the belief. Finally, the values of the agent are playing a role. These three possible influences are connected, in the sense that emotions, attitudes, and values influence each other, but that does not necessarily mean that they all affect beliefs in the same way. There may also be multiple ways in which each of these factors influence beliefs. I will use the term 'importance' to refer to the effect of these kind of factors. This does not necessarily simply mean that it is important to us to hold the beliefs, though it can mean this.

[40] There may be others as well. I am not worried by this possibility. I am simply focusing on these.

Rather, I will describe a belief as important as a shorthand for when it is being affected by emotions, attitudes and/or values.

2.4.1. Emotions

It seems to me that there is a case to be made for the view that emotions have an impact on beliefs. Emotion has been understood in different ways, and one of the differences is just how cognitive emotions actually are. There are various plausible accounts which suggest that emotion does have at least some role to play in how we form and hold beliefs.

Alison Jaggar[41] sets out a picture of belief which takes the interplay between the emotional and the cognitive seriously. She argues that the distinction between the rational and the emotional is artificial. Beliefs and emotions are involved in a dialectical relationship. Emotions, she argues, must be in some sense dependent on beliefs. She points out that the same physiological feeling can be interpreted differently based on the situation. The feeling produced by adrenaline, for example, might be interpreted as fear or excitement depending on the context, and one's beliefs about what emotions are appropriate in which contexts. This is, according to Jaggar, likely to be partially socially constructed, because of the importance of having concepts which are given meaning by our cultures. Someone born in a culture without the concept of fidelity, for example, would not feel betrayal at infidelity.

So beliefs underlie emotions in that they give meaning to the meaningful aspects of emotion. They give form to emotion, prescribe what emotion is appropriate when, and enable us to understand complex emotions.

Beliefs thus underlie emotions, but emotions also underlie beliefs. Belief formation based on observation, for example, is affected by emotion. We select and interpret information about the world around us, and both the selection and interpretation are affected by emotion.

Ronald de Sousa makes a similar point, but focuses more on the impact emotions can have on belief. In his discussion of emotion he suggests that human emotions affect decisions by "orienting attention toward this or that among the plethora of considerations that might be thought relevant at any particular juncture."[42] So emotions pick out what is important enough to take into consideration when forming beliefs about the world through observation.

Jaggar goes slightly further than de Sousa, however. On her picture, concepts and emotions are closely related. Having the concept "fidelity" is what enables me to be angry or hurt at infidelity.

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[41] Jaggar, 'Love and Knowledge: Emotion in Feminist Epistemology'.
[42] De Sousa, 'Emotions: What I know, What I'd like to Think I Know, and What I'd Like to Think', in Solomon (Ed), *Thinking About Feeling: Contemporary Philosophers on Emotions,* p.65

On the other hand, the negative emotions attached to the concept are part of what makes the concept one of something bad.

The two domains here – the rational and the emotional – are not the same thing, but they are also not separate. Both Jaggar and de Sousa see emotions as being able to highlight aspects of the world we experience, and draw our attention to the ones that seem relevant. Furthermore, the meaning we make of the world is influenced by the emotional character of certain concepts, such as infidelity. Both of these roles are important in helping us to be the kind of agents that we are. Firstly, we simply cannot take in everything about the world all at once. In guiding what we pay attention to in this way, emotion plays an important guiding role, enabling us to function as believers in the world. Furthermore, the influence of emotion on the richness of meaning we can gain from the world plays an epistemic role as well. For Jaggar, concepts are partly constituted by the relevant emotions. The interplay between beliefs and emotions enables us to make much better sense of the world. The difference between the concept of infidelity, and the concept of a polyamorous relationship is one example of this. There are factual differences between the two things, but the difference in their emotional character is also important for fully understanding the difference between the two. Someone who lives in a society that has the first concept but not the second would not have a full understanding of what was happening if she encountered a polyamorous relationship. Furthermore, she would not fully understand the difference until she came to understand the emotions attached to the second concept rather than the first.

Peter Goldie has a picture similar to Jaggar and de Sousa, but he also focuses on the ways in which the relationship between emotions and beliefs can go wrong. He argues that emotions can play a significant epistemic role, in a way that makes us more effective and efficient epistemic agents, but also leaves us open to "skew[ing] the epistemic landscape"[43] in such a way that we end up with fixed beliefs.

On Goldie's account, emotions (including their physiological, phenomenological component - feelings) are intentional, and often involve judgements about the intentional object. So when I feel anger at a perceived wrong, that emotion is about the object – the perceived wrong – but also involves a judgement that the object is appropriate to anger. The object having the "emotion-proper property"[44] is what justifies both the feeling and the judgement.

On this picture, emotions can be an important epistemic tool. Goldie, in a move similar to Jaggar and de Sousa argues that emotion can draw our attention to aspects of the world. Goldie characterises this as being more sensitive to what is going on around us. He argues that

[43] Goldie, 'Emotion, Feeling and Knowledge of the world', p. 99
[44] Goldie, 'Emotion, Feeling and Knowledge of the world', p. 97

> [Emotions] can enable us to see things in their true light and to make justified perceptual judgments in ways that we would not otherwise be able to do: emotions can reveal saliences that we might not otherwise recognize with the same speed and reliability. For example, we can immediately see that something is disgusting in a way that we would not be capable of if we were not capable of feeling disgust. Our emotional dispositions can, so to speak, *attune* us to the world around us, enabling us quickly and reliably to see things as they really are, and thus to respond as we should. In short, emotions enable us to *get things right.*[45]

Goldie worries, however, that emotions might also have a skewing impact on our epistemic lives. The emotions and judgements that we have in response to an object ought to be justified by properties of the object. For an emotion to be justified there must be reason for that emotion – its intentional object has to actually have the emotion-proper property. The issue for Goldie is that we tend to access the emotion or judgement first, and then go back to try and find the reason for it. So we feel anger at someone's actions, make the judgement that their actions are worthy of anger, and then justify that by post-hoc appeals to features of the action. This can be a reasonable response, when one is responding in proportion to genuine features of the action, and when those features genuinely have the emotion-proper property. Often, though, we are being influenced by emotions when we are unaware of them, which means that we are likely to see the situation differently without being able to check whether the emotion – and thus the effect that it is having on our beliefs – is justified. In addition, because we feel the emotion first, and then engage with the justification for it, what sometimes happens is that we come up with rationalisations instead of justifications. We find reasons for our emotions even when the object we are responding to does not have the emotion-proper property.

On a view of emotion drawn from Jaggar, de Sousa, and Goldie's views, emotions sensitise and attune us to the world, both through drawing our attention to certain features of the world, and through partly constituting the meaning we make of the world. This is a vital epistemic project, but it does leave us open to making judgements based on emotions and backstopping the evidence. We ought rather to make the judgement as a response to both emotional insight, and evidence of whatever we are reacting to having the emotion-proper property.

Given this, it is easy to see how emotional components might cause to us engage in the phenomena. If we have a particular emotional reaction to an event, person, state of the world, etc., then it is possible that we can form judgements – and maintain those judgements – without necessarily paying attention to whether whatever we are responding to has the emotion-proper

[45] Goldie, 'Emotion, Feeling and Knowledge of the world', pp. 98-99

property. The emotion tells us that there is a certain response we ought to have, but we do not engage with the evidence in order to substantiate this. Rather, we engage with the evidence in such a way that we find support for what our emotional state tells us, however unconsciously, is the case. Engaging in hyper-criticality is one way in which we could do this – we hold the belief we have formed on the basis of our emotional response steady, and engage very critically with evidence that disconfirms that belief, while accepting without too much critical analysis evidence which confirms it. We feel that the belief must be true, and we engage with the evidence as such.

One reason we do tend to trust our emotions is that we assume that we would not have emotional responses for no reason. The problem with this is that there could be factors playing a role in developing our emotions that are not to do with the properties or characteristics of whatever we are reacting to. It is difficult to spell out the ways in which this might work in the abstract, so I will focus on the kind that might cause someone to have fixed sexually prejudiced beliefs.

Emotion could be related to the desire to hold a belief steady in the sense that the desire either to continue to feel a particular emotion, or to begin to feel it, might give us a motivation to hold particular beliefs. The sexually prejudiced person might, for example, be tempted to hold sexually prejudiced beliefs steady because she fears feeling outcast by her church group if she gives them up. She may fear the possible repercussions[46] of coming to disagree with them about something like homosexuality – the alienation, the loss of the feeling that she belongs to a community, the safeness of a religious support system etc. The process by which the desire turns into actual belief, or causes one to hold a particular belief steady, would have to be unconscious. Common consensus is that we cannot choose whether to believe something or not – and we cannot consciously believe for non-evidential reasons.

The sexually prejudiced person might also be motivated to hold onto sexually prejudiced beliefs because admitting that she is wrong about them says something about her character. We value being the kind of people who do not unfairly discriminate. We also tend to feel shame for past actions that we now feel were wrong. Given this, she might think something along the lines of "am I really the kind of person who believed/did that?" Avoiding these kind of emotions can affect our willingness to change prejudicial beliefs.

Furthermore, even if we are responding to some property of whoever or whatever we are reacting to, there is no guarantee that the emotional response we have will be the best one we could have had in that situation. It is difficult, of course, to spell out exactly what it might mean to say that someone is experiencing an inappropriate emotion, but I do think that we can do this. We do

[46] I could, of course, be wrong about the repercussions – they may be more accepting than I anticipate. I suspect, however, that in many cases these fears might be justified.

prescribe, to some extent at least, what emotional reactions are appropriate to a situation, person, or object. Someone who responds with a great deal of anger when faced with a small aggravation is seen as being irrational in some way, even if they do not act on that anger. Similarly, if someone fails to feel anger at deep injustice, we tend to think that there is something lacking in their emotional response. I would argue that, in cases where the sexually prejudiced person is responding to someone's sexuality in particular with negative emotions such as disgust, disappointment, anger etc., she is responding inappropriately to a feature of LGBTIAQ people. Of course, the sexually prejudiced person might argue that I am failing to respond appropriately to a feature of LGBTIAQ people. Again, both of us could have emotional commitments that we then justify with the evidence we can gather.

One might argue that this is not, strictly speaking, an epistemic problem. Feeling inappropriately could be seen as being in the domain of morality, rather than epistemology – and indeed it presumably does have moral implications, especially if the feelings guide action. Given the picture of the relationships between beliefs and emotions above, however, inappropriate emotions have epistemic consequences as well, particularly if they spark off the kind of backwards justification that Goldie describes.

Essentially, then, because of the relationship between emotions and beliefs, emotions can affect our willingness to engage in the right way with the evidence for particular beliefs. Because we sometimes use our emotions as a starting point, and engage with the evidence in order to justify the emotion, rather than judging the emotion based on the evidence, emotions can cause us to engage in hyper-criticality and ideé fixe. This can either be because we have an interest in maintaining that belief, or because we have strong emotions about a particular state of affairs, feature of the world, or person.

Ideé fixe and hyper-criticality thus make sense from the perspective of emotion as a motivating factor for holding beliefs steady. In terms of polarisation, it seems to me that an emotional need to continue to hold a belief might lead us to respond by having our beliefs become polarized.

I mentioned earlier in this chapter that we want to be right about ethical beliefs. I also argued that there might be something irrational going on in the case of polarisation, because we seem to be taking what we perceive to be weak evidence for the position that opposes ours as positive evidence for our own view. I argued that seeing evidence in this way might be part of an attitude that sees argument as a kind of battle. Given this, it seems at least plausible that the influence of strong emotions might heighten this tendency. A challenge to an emotion one is feeling might cause one to end up having a stronger emotional reaction. If the challenge makes us defensive, the heightened emotional state, tied in with the battlefield attitude towards argument, might serve as an additional motivation to engage in this phenomenon.

Emotion's effect on belief, then, means that the emotional importance of a belief can serve as a motivation – and unconscious one – to engage in the phenomena. In the following section, I will argue that our attitudes can also do so.

2.4.2. Attitudes

An attitude towards something can best be described as a disposition to act and feel in certain ways and believe certain things. So "[a] person with a certain attitude toward something S (a particular or kind of object, property or event) will be, among other things, *attentive to certain features* of S, *inclined to describe or understand* S in certain ways, disposed to feel certain *emotions* toward S, disposed to certain *beliefs* toward S, disposed to *praise* or *blame* S in certain conditions, and disposed to *act* in certain ways toward S."[47] On this definition, emotion and belief are both components of attitudes – or at least attitudes overarch them in some ways. The picture of the mutual influence on each other of emotions and beliefs that I described in the previous section fits into this view of attitudes. If tendencies towards emotion and belief both fall under the label of attitudes, then it is not surprising that, as components of attitudes, they have an influence on each other.

We tend to try and maintain a kind of unity or harmony in our relationships towards things. Discord worries us. If someone has an attitude of disgust towards homosexuality, but believes that sexual prejudice is wrong, there is going to be discord between her attitude (particularly her emotions and desires) and her beliefs. An attitude of disgust involves negative emotions and probably negative behaviour responses. When one is disgusted by something, one would likely try to avoid coming into contact with it, for example. So if the person in question is disgusted by homosexuality, she may tend to avoid spending time with homosexual people. She may tend to hold negative emotions about people based on their sexuality. She may even flinch away from physical contact with someone who is homosexual, or something similar. If she knows that the sexual orientation of the people in question is what is causing her to respond negatively to them, and she simultaneously believes that sexual prejudice is wrong, there will be discord between her beliefs, and her tendencies to feel and behave in certain ways towards homosexual people. This kind of discord is uncomfortable, and I think part of why we try and avoid changing beliefs that are related to strong attitudes is that we do not want to create internal conflict between our attitudes and beliefs. Such conflict requires us to work to reconcile the two conflicting elements.

[47] Jones, W, Philosophy and the Ethical Significance of Spectatorship: An Introduction to *Ethics at the Cinema*' in Jones and Vice, (Ed.) *Ethics at the Cinema*, p. 4

In the case where one has a belief that is in line with the rest of one's attitude, if one's belief does change, it would create what I will call a rogue element – a component of the attitude which is not in line with the rest of that attitude. I might dislike ice-skating, and believe that there are sports that would be much better for me to do. If I then continue to ice-skate because all my friends enjoy it, then my tendency towards acting in this way – going ice-skating – does not fit with the rest of my attitude towards the sport. It is the rogue element of my attitude towards ice-skating. My tendencies towards action (my tendency to go ice-skating when asked), is in conflict with my tendency to feel negatively about the action (to dislike it, which would normally lead to me avoiding it). It is also in conflict with my tendency to believe certain things about ice-skating (for example that it is a good way to have fun or relieve stress, or an enjoyable way to spend an afternoon). In this case, the discord could be caused by another, consistent attitude – my attitude towards my friends, for example. The example of the person who is disgusted by homosexuality, but believes that sexual prejudice is wrong would be this kind of rogue element case. Her tendency to act in certain ways towards, and her tendency to feel certain things about homosexual people are both in conflict with her beliefs.

Avoiding the discord caused by the development of a rogue element might serve as an unconscious motivation to hold a belief steady on the face of counter-evidence.[48] In a case where someone has a negative attitude towards homosexuality or LGBTIAQ people, and is then faced with an argument which suggests that their belief is unjustified, the pull of the attitude could be enough to motivate the person to hold that belief steady despite the evidence. It serves, in other words, as a motivation for engaging in ideé fixe. Hyper-criticality then again comes in, as a way of bringing about ideé fixe. There may also be other ways in which we maintain that belief steady within the attitude – not least that the influence that emotion has on belief might play a role in keeping beliefs in line with the rest of the attitude. Though it would be an interesting project to try and work out exactly how we might keep the components of our attitudes in line with each other, it is beyond my scope here. I simply wish to illustrate that this might be another way in which affective states could have an influence on beliefs.

2.4.3. Values.

Values, attitudes and emotions seem to me also to be linked. What we think is valuable is going to affect and be affected by what we care about. Values themselves are tied both to beliefs, and to

[48] It is worth noting that this has implications for changing beliefs through argument. It suggests that it is possible – one can cause discord through argument, and the person can resolve it in favour of the new belief. I think this is right, but that the pull of the attitude is often strong enough that the belief is held steady, rather than the belief bringing the attitude with it when it changes.

emotions. As Jaggar points out, "emotions provide the experiential basis for values"[49] – I *feel* outrage at a moral wrong. Values also underlie emotions, though – feeling moral outrage presupposes that I have made a judgement that something is morally wrong, which presupposes that I have moral beliefs. Finally, having an attitude towards something presumably involves some kind of value judgement about it. Attitudes often involve either negative or positive connotations. If I have a distrustful attitude towards someone, and I value trustworthiness, then part of my attitude involves a value-judgement about the person I am distrusting. I judge that the person does not meet the standards for trustworthiness, and thus is lacking a valuable quality.

It seems, then, that emotions, attitudes, and beliefs are all related to values. Given what I have said so far, this suggests that, insofar as these ties affect beliefs, values are also likely to have an effect on beliefs – an indirect effect, at least.

If, then, I value equal treatment regardless of sexuality, and someone gives me an argument for why gay marriage should not be allowed, I am likely to experience certain negative emotions. I may be angry, or disappointed. I may be frustrated. These emotional reactions are, I think, based on the beliefs I have, but they are also based on what I value. It is possible that, given this situation, I may not genuinely engage with the person's argument – in fact, I am unlikely to. Similarly, if someone who is sexually prejudiced values the nuclear family, and believes that gay marriage is opposed to this value, then being presented with an argument for marriage equality might give rise to certain negative emotions in that person. In both cases, beliefs already held are playing a role. The emotional response of both me and the sexually prejudiced person, however, may mean that we engage with the other person's argument hyper-critically, in order to engage in ideé fixe. In this case, the value is playing the more fundamental motivational role, in that it is the value that is causing the emotional state. Nonetheless, it is the emotional component that is directly interacting with beliefs.

There is also a link between values and attitudes. The values we hold as part of an attitude are likely to contribute to the pull of the attitude on belief when it comes to avoiding discord between our beliefs and our attitudes. If something is valuable to us, then it seems to me that it is going to be more important to us to avoid discord about it. It is, after all, easier for us to change the attitudes we have towards things that are not important, because in this situation, discord does not pose as much of a threat to us. We have two options when faced with discord – we can change the attitude, or we can change the component that is at odds with the rest of the attitude. The latter is easier, which might cause us to take that path in the same way that we might be motivated to avoid making too many changes to our belief webs. In both cases, holding the belief steady is the easiest course of action. It may also strike us as the morally better option in the case of a fixed belief about something we have

[49] Jaggar, 'Love and Knowledge: Emotion in Feminist Epistemology', p. 153

value-based commitments to. I might have a mildly positive attitude towards a company, and a more negative or ambivalent attitude towards their main competitor, thinking that the products of the one I support are better value for money. Despite this, when presented with evidence that the products from the company I prefer are beginning to drop in quality, I may well change my belief about the quality of their products, and perhaps the attitude as well. The discord here does not really worry me, because it is not important to me. I can resolve it without stress, so changing the belief does not hold much danger for me – I can just shift the attitude with it. I do not strongly value one over the other. If I deeply value something about one of the companies, however – perhaps their environmental policies, or their labour policies – then I am more likely to try and find a way to keep my belief that the initial company is still better than the competing company. Similarly, if I have a strong attitude towards something that is valuable to me – for example equality regardless of sexual orientation or gender identity – I am much less likely to be willing to change the belief, and the attitude with it, than if it is something that I do not have strong value-based commitments to.

Valuing something is thus likely to motivate emotional responses that then exert influence on the way in which we engage with the evidence available to us. It is also likely to affect the strength of the pull of our attitudes on our beliefs.

2.6. Quine and Importance.

I do think that the view that the importance of a belief affects our willingness to give it up in response to evidence is compatible with a web-of-belief kind of picture. Quine himself may have been sceptical of the addition of importance as a factor to consider when one is trying to work out why we hold certain beliefs steady in the face of evidence. I think, however, that the essence of what I am taking from Quine here – the web-like structure of belief – fits in with importance as being relevant, or at least is not incompatible with it. The web of belief deals with the evidential, logical connections between beliefs, including value-based beliefs. Some of these beliefs are closer to observation than others. This structure gives us some insight into why we might be motivated to hold some beliefs steady given the epistemic part of their nature. Nothing in this picture, however, precludes the possibility of emotion affecting belief. The web of belief is a picture of how beliefs fit together, of their structure. This still allows for the possibility that emotions can play a role in informing particular beliefs. Furthermore, Quine leaves open the possibility that we can hold any belief steady if we make enough changes to the belief web in response to evidence. It is possible that emotion could play a role in determining what beliefs we would want to give up on. The web of belief then shifts to accommodate that. Because of the importance of the belief, we perhaps engage in hyper-criticality –

to avoid the belief that the evidence is good, and thus avoid having to change the important belief. We could do this, even if the belief in question were peripheral.

Finally, both emotion and the background beliefs we have can affect what we pay attention to in the world. The web-like structure of belief affects what we think is relevant in new information, as it is partly the beliefs we have about evidence and so forth that tell us what counts as evidence, what is interesting about evidence etc. Emotion, on Jaggar, de Sousa, and Goldie's views, draws our attention to what is relevant. While these two factors might not always draw our attention to the same features of the world, or the evidence, and may in fact sometimes prioritise different aspects of the world, they are perfectly compatible with each other. The web-like structure of belief can cause us to hold particular beliefs steady because of their interconnected nature, and because it means that the beliefs we already have shape how we see the world. Importance can affect the content of particular beliefs. It can affect which features of the world we notice, thus affecting how we manage our belief webs. It can also affect which beliefs we choose to maintain within our belief webs.

Essentially, we have at least two different motivations for engaging in ideé fixe. The structure of our belief-webs means that we have a motivation to hold certain beliefs steady because of their centrality. The importance of some beliefs gives us motivation to hold them steady, whether they are central or peripheral. These two motivations come apart – they might sometimes pick out different beliefs to be held steady. This does not mean they are incompatible with each other, however. We do sometimes have competing claims on our beliefs, in the same way as we sometimes have competing moral claims. This does not mean that only one of those factors can have a claim on our beliefs (or our moral decisions).

I have tried, in this chapter, to sketch out an account of the motivations we might have for engaging in the phenomena – particularly the central one of ideé fixe. The picture I have set out gives a picture of belief and emotion that tries to capture the fact that we need to make sense of new evidence from the perspective of the beliefs – and to a certain extent values and emotions – that we already have. After all, the picture I have set out shows how the way our belief systems work can go wrong, but also how our beliefs work at all. In the next chapter, I will argue that balancing the fact that we need to work from our existing perspectives with the need to respond to new information well is an epistemic virtue.

Chapter 3: When is it justifiable to hold beliefs steady?

Apart from polarisation, a Quinean account of belief gives an explanation of the motivational basis for the phenomena in a way that makes sense of the tendency to engage in them, at least up to a point. After all, central beliefs are ones which are connected to many other beliefs. It thus not only makes motivational sense to hold these beliefs steady, it also makes rational sense. Roughly, if a belief fits in with the rest of our beliefs, and makes sense within the way we see the world, then one could argue that the other beliefs one has provides some support for the belief in question. A proposition fitting in with the rest of what we know about the world seems to give us a basic reason to think that that proposition is at least basically plausible. If, for example, I mention to someone that I have been having a lot of headaches, and she tells me that they are likely tension-related, I may be inclined to believe her based on my knowledge that I am unusually stressed at the moment, that muscle tension can manifest as pain, etc. I do not necessarily have to go to the doctor for this belief to be plausible, though it might be an idea to do so if I want to be sure of the cause of my headaches. Our other beliefs might make it reasonable to accept, at least to a certain extent, a new proposition without necessarily having extra evidence for it.

Not only does Quine's picture of belief make it seem reasonable to hold onto beliefs in the face of evidence, emotions also play quite an important epistemic role. The accounts I have described and endorsed argue that emotions can inform us about the world. They become problematic when they move from informing us to blinding us to evidence, or causing us to engage with evidence on the assumption that the emotion is responding to an emotion-proper property actually possessed by the object in question without evidence that this assumption is justified. The line between emotions telling us something important about the world, and skewing our perceptions of it, is not particularly clear. It is plausible that there could be cases where someone is failing to respond to evidence, because her emotional responses are telling her that there is something wrong. In the time before the term sexual harassment had been coined, for example, someone experiencing sexual harassment felt that something more than flirting was happening. Her negative emotions alerted her to the fact that something was not right, even though the dominant interpretation at the time meant that all the evidence fit the definition of flirting, rather than something else. In this case, she is not responding to the evidence as someone else at the time might have, but this places her in a better epistemic position, not a worse one.[50] She is not ignoring the evidence, she is challenging the dominant interpretation of it.

[50] The example of sexual harassment is adapted from Miranda Fricker, *Epistemic Injustice: Power and the Ethics of Knowing*, p.149.

It may then be that beliefs that are both central and important ought to be held steady in the face of evidence – or at least that they rationally can.

Despite this, it seems to me that there are worrisome aspects of the phenomena which are not explained in such a way that they cease to be problematic. It seems to me that Quine's lesson – that we try and avoid re-arranging our belief systems – becomes problematic when we slip from using background beliefs to make sense of new information to being rigid and unable to respond to new information as we should. The former is reasonable the latter is not.

Furthermore, there are instances of emotions influencing beliefs in ways that are epistemically problematic. Emotions can cause us to shut out evidence, engaging with it hyper-critically instead of re-interpreting or challenging the dominant ways of engaging with it, as happened in the sexual harassment case.

In this section, I will argue that managing to find the right level of evidence-responsiveness, given these two factors, is an intellectual or epistemic virtue. This level of evidence-responsiveness would need to be one that enables one to both use one's background beliefs, and be sensitive to the fact that emotion can tell one things about the world. It would need to do this without either of these things making one fail to respond to evidence that one ought to respond to. I will argue that, provided Lord, Ross and Lepper are to be trusted, their experiment shows us that we often do the latter when we engage in the phenomena. This means that we tend not to be intellectually virtuous when it comes to beliefs prone to the phenomena.

I take it that intellectual virtues would be traits that allow us to excellently inquire about the world. The virtuous mean would be the feature of one's intellectual characteristics that helps one to inquire excellently. As with most other Aristotelian-style virtues, there would be two corresponding vices. Given that the virtuous mean involves negotiating between these two vices, I will spell the vices out first, then discuss the virtue that lies between them.

3.1. The Vices

The first, and probably more common, of the two vices in question is what I will call rigidity. The second is naivety or gullibility[51]. The former would mean holding onto our beliefs too strongly because they are embedded in our belief webs. We fail to revise a belief which the evidence does actually show is wrong. The latter would mean giving up on our beliefs too easily in response to counter-evidence – failing, for example, to be critical of evidence. We need to strike a balance between these two extremes in order to be epistemically virtuous.

[51] I will continue to use the term gullibility. It is taken from Spiegel, 'Open-Mindedness and Intellectual Humility', which I will make use of later in this chapter.

Gullibility is a problem because giving up on beliefs too quickly leaves us without the resources to critically engage with new evidence. Background beliefs – about causality, about what certain evidence means etc. – are necessary in order to connect evidence with a hypothesis. For evidence to be meaningful, we have to have beliefs about the world that enable us to make sense of what the new evidence is telling us. In order for a falling apple to lead me to a belief about gravity, I have to believe that all objects behave the same when they are dropped. We cannot look at new hypotheses and new evidence from an empty, neutral viewpoint. There is no view from nowhere. If we did not hold mathematics steady, for example, most experimentation would be impossible, certainly in the field of physics. This connection between background beliefs and new evidence is not yet to do with epistemic virtue – all I have said so far is that we need tools to make sense of new evidence, and that those tools are to be found in our existing beliefs. When one brings in the idea of critically engaging with new evidence, however, it becomes clearer how gullibility is a problem. In order to engage critically with new evidence, one has to test it against the standards one already has, and the things that one already knows. If we give up on beliefs in response to new evidence too easily, then the new evidence is not being well tested. Furthermore, when one's previous beliefs are well justified, it makes epistemic sense that this serves as a reason to maintain them in the face of some contradictory observation, at least at first. I should not give up on my belief that 2+2=4 as soon as only three socks come out of the washing machine. On the other hand, beliefs do need to change, as, sometimes, do our epistemic standards. As we learn more about the world, and come across new evidence in it, we should realise that beliefs we hold are unjustified – and if evidence really does sufficiently show this, we must change our beliefs.

Affective states, particularly emotions, in virtue of having an effect on belief, can have an impact on whether or not we are being gullible. I think this effect can play out in two ways. We can be gullible if we too easily give up beliefs that affective states tell us we should hold steady. We can also be gullible when it comes to affective states, however, trusting them too much. So if I am really uncomfortable with the results of a study that challenges one of my beliefs – if I am experiencing negative emotions about it, or it conflicts with a deeply-held value or attitude – then it is a clue that it needs to be interrogated further. These things can tell us about the world – attitudes through emotions, and values both through emotions and in their own right. Here, it is me ignoring emotions (or attitudes, or values) that makes me gullible. On the other hand, if my emotions are in support of new evidence, and I buy into the new evidence straight away because of this, I am also being gullible. I should not accept a study claiming to prove that climate change is not as bad as we thought it was, even if my emotional response to it is positive. Though my reaction to emotion in each of these cases

is diametrically opposed, the end result – giving up beliefs in response to new evidence too easily – is gullible.

Rigidity, on the other hand, happens when our commitment to our already-held beliefs and epistemic standards is so strong that we fail to change our beliefs in response to evidence that is already good. There are both epistemic and moral reasons to think that rigidity is problematic, but I will focus here on the epistemic ones.

A fairly widely accepted premise is that we must see our own beliefs as being based on evidence. Jonathan Adler in *Belief's Own Ethics* takes this kind of position as a starting point, arguing that we cannot choose to believe something for pragmatic reasons. He supports evidentialism, the view that beliefs should be based on evidence, and the strength of the evidence for a belief should determine how strongly we hold it. He phrases this in terms of what he calls the subjective principle of sufficient reason – "[w]hen one attends to any of one's beliefs, one must regard it as believed for sufficient or adequate reasons."[52] On Adler's view, as well as in literature around the aim of belief, the view is that we must see our own beliefs as being held for epistemic reasons that adequately support them. This is not to say that we cannot have beliefs that are held for non-epistemic reasons (or bad reasons for that matter), but we cannot be aware of this without our belief being undercut. I think that this would be true even of beliefs that have been influenced by affective states. We may be aware of the fact that a particular belief is deeply valuable to us, for example, but we also have to believe that it is *true*, independent of our valuing it, in order to keep believing it.

Adler's characterisation of evidentialism is perhaps a little stronger than is appropriate for a virtue-epistemological view of belief. I have argued that both a Quinean picture of belief, and the picture of how affective states affect belief suggests that it is sometimes reasonable for non-epistemic factors to affect beliefs. One might argue that, insofar as our affective states are informing us about the world, they count as evidence. I am a little suspicious of this. Affective states attune us to the world, but they do not directly support conclusions. Nonetheless, I think that the view that affective states, and the interconnected nature of belief are both compatible with the spirit of Adler's view.

Though Adler does not argue for this, it seems to me that a commitment to evidentialism relies on the view that evidence has a claim on our beliefs. By its nature, evidence is a reason to believe that something is true. This does not mean that we must automatically believe anything evidence suggests. It can be misleading, it can be misinterpreted, and it can be difficult to understand. But strong evidence for a position or belief constitutes a reason to think that the belief is true. If there is strong evidence for two different beliefs, then there is reason to be concerned about believing either of them, at least without further thought, because it means that there is both good reason to believe

[52] Adler, *Belief's Own Ethics*, p. 26

and good reason to disbelieve each of the claims. The fact that evidence has a claim on our beliefs, and that the strength of the evidence has implications for our beliefs, is compatible with the view that both affective states and the interconnected nature of belief can affect our beliefs. Evidence having a claim on us does not mean that affective states do not tell us about the world, nor that we can interpret evidence without testing it against already held standards of belief. It is how to interpret the weight of evidence that is at stake when it comes to the Quinean picture of belief, and the effect of affective states on our beliefs.

Additionally, rigidity is epistemically problematic because it simply is not useful for achieving the ends of inquiry. Scientific advancement – in fact, any kind of advancement in inquiry – requires some kind of adaptability. In order to be adaptable, I need to be able to give up on beliefs that are not useful in response to new situations or new evidence. If scientific advancement (for example) is going to get anywhere, there has to be a point at which we are willing to radically change our belief webs. This, I take it, is what is happening with paradigm shifts. If we are to achieve our aim of engaging with the world in more effective and better ways (and this is an aim I take it we do have), then adaptability is going to be important. Rigidity is also a poor way of achieving another important end of inquiry – getting at truth. We are sometimes dramatically wrong about things, and holding too strongly onto our beliefs will prevent us from being open to that possibility. That is not to say that we always have to keep it in mind, but when we are confronted by evidence that we are wrong about something, it is important that we consider that evidence on its own merit – and this is going to involve looking at the justification for our own beliefs.

It would be impractical to re-arrange our belief webs at the slightest sign of disconfirming evidence – it would be ridiculous to give up on basic mathematical beliefs every time I put two pairs of socks in the washing machine and only three come out. At the same time, we do sometimes need to change our beliefs in response to evidence, or we would never advance our knowledge. We need to strike a balance between these two extremes – these two vices – in order to effectively balance the need to respond to evidence and the need to hold justified beliefs steady (in the face of forged evidence, for example).

Affective states can both support and interfere with this project. They can draw our attention to features of the world that we have not before noticed, and may otherwise not have noticed. Sympathy for an exhausted student, for example, might lead one to notice that she is struggling, and draw conclusions about the support available for students who are not coping with content. Furthermore, as Jaggar argues, emotions can alert us to the fact that there is something problematic in the dominant interpretation of a phenomenon – as is the case where someone who is experiencing sexual harassment, but does not yet have access to the term. The emotions tell her that something is

going on that is not flirting, though the dominant interpretation of the available evidence says otherwise. Ignoring emotions such as these can lead one to having a rigid belief system. In the former case, I think we can hold the person responsible if she ignores the emotions involved. In the latter, I think we probably cannot do so. In the former case, there is nothing obscuring the relevant interpretation of the problem. In the latter case there is – the dominant societal interpretation. In the former case, ignoring the evidence might contribute to holding onto a belief that the support structures available to students are sufficient in an epistemically vicious way. In the sexual harassment case, I do not think that the person experiencing sexual harassment can be held responsible if she disregards her emotions. She is not necessarily being epistemically vicious. Ignoring emotional factors can therefore lead us to being rigid, but so can letting emotions prevent us from appreciating the full weight of evidence. In the Lord, Ross, and Lepper case, for example, the participants who disagreed with capital punishments' negative emotional responses to capital punishment may have affected their hyper-critical engagement with the evidence, thus leading them to be rigid.

It seems to me that the participants in the Lord, Ross and Lepper experiment were, through the phenomena, being rigid. They were presented with two sets of experiments, which met roughly the same standards. All studies were designed to be convincing by standards of social psychology at the time. Despite the fact that the two sets of evidence met the same standards, they evaluated the evidence against their position as being bad, whereas they evaluated the evidence supporting their position as being good. They were presented with evidence that, by their own standards, ought to have been good evidence (given that they evaluated the equivalent supporting evidence as being good), but which contradicted their already held commitments. Of course, in real life the evidence is often less clear – sometimes it takes the form of arguments (which can be disagreed with), it is often inconclusive etc. Nonetheless, situations where we are presented with good evidence that contradicts our beliefs do occur. It might be more difficult to know when evidence is good outside of the laboratory, but we do generally have some idea of what counts as good evidence and what does not.

The Lord, Ross and Lepper participants, then, were presented with good evidence – I want to re-iterate, evidence that they ought to have seen as good by their own standards – against their initial beliefs, as well as good evidence for their initial beliefs. They responded by being very critical of the evidence that challenged their beliefs, and not very critical of the evidence that supported their beliefs. This is rational up to a point. It is reasonable, given strong initial beliefs, to want to come out of a debate having proved to a reasonable level of satisfaction that one's initial position was right. This is particularly true if the beliefs in question are important to one, as may have been the case with the participants. Furthermore, in the interests of avoiding gullibility, it was reasonable for the participants to use their own beliefs as a starting point. The problem comes in, however, when that desire – the

desire to hold one's belief-web steady – influences the way one engages with the evidence at one's disposal. The evidence ought to be engaged with on its own merits, rather than on the merits – or lack thereof – one wishes it had. Given strong contradictory evidence, the participants ought to have taken it as a reason to re-examine the justification for their own views. Lord, Ross and Lepper report that the participants engaged with the contradictory evidence, but in such a way that it was clear they were not engaging with all the available evidence in the same way. They spent more time on the contradictory evidence than on the evidence that confirmed their position. They were very critical of the contradictory evidence, and very uncritical of the evidence that supported their initial position. The participants evaluated the two studies based on their previous commitments rather than on the strength of the actual evidence. They were not engaging with the evidence on its own merits. This has ceased to be a case of avoiding gullibility, and has moved into a case of being rigid. I am not necessarily saying that they ought to have changed the belief at the end of the study. They ought, however, to have engaged with the evidence more equally, and been willing to re-examine the belief in light of the evidence.

Perhaps the best way of explaining what is going wrong with the way the participants were engaging with the evidence given to them is to refer to Marc Champagne's paper 'Disjunctivism and the Ethics of Disbelief'. He argues that we do not have a standing duty to continuously evaluate and re-evaluate our beliefs. Instead he argues that we ought to reflect on our beliefs when we come across something in the world which does not fit with them – when there is "a salient discordance with the world."[53] When we have a certain expectation, and that expectation is frustrated by a state of the world, we ought to reflect on our beliefs. It seems to me that strong contradictory evidence should serve as such a frustration. If one believes that capital punishment is not effective, a study showing that it has deterred crime is a frustrated expectation, and should cause one to reflect on one's own belief – not only on the opposing evidence. The participants ought to have critically reflected on their beliefs. They did not examine the evidence for their own position much at all. They did try to engage critically with the oppositional evidence – they did not simply dismiss it – but they also did not engage with it on its own merit. If they had, they would have recognised the merit of the studies as compared to the studies that supported their view. They were rigid rather than conservative in that they held their beliefs steady in such a way that they no longer engaged properly with evidence. Doing so is harmful to inquiring excellently, and is as such not epistemically virtuous.

One possible challenge to my description of the phenomena as being instances of epistemic vice can be found in Thomas Kelly's paper 'Disagreement, Dogmatism, and Belief Polarization'. Kelly argues that the requirement to give all evidence we encounter equal weight. He argues that it is

[53] Champagne, 'Disjunctivism and the ethics of disbelief', p. 154

reasonable to give little attention to confirming evidence. It is when we come across disconfirming evidence that we need to pay attention to it. He uses the example of thinking someone is honest. If one has this initial belief, then all incidents where the person behaves with honesty will count as confirming evidence. It is perfectly reasonable, Kelly argues, to take these incidents as evidence without interrogating it. It is only if we are confronted with evidence that seems to disconfirm the initial belief that we need to interrogate it.[54]

Kelly also argues that it is possible that, even given two people who have access to the same body of evidence in a narrow sense, they might not have the same evidence in a broad sense. He argues that having the same set of evidence in the narrow sense – the sense of having "relevant information about the world"[55] – does not necessarily mean that two people will have the same evidence in the broad sense. The broad sense of evidence includes how many (and which) alternative hypotheses that might explain the evidence, the agent is aware of. This is, in turn, affected by the initial beliefs that the agent has. Someone who believes that capital punishment deters crime will assume that the hypothesis "capital punishment is a crime deterrent" will explain evidence that crime statistics are higher in states without capital punishment. Someone who does not believe that, will look for alternative hypotheses. Provided they are not ad-hoc, Kelly argues that this is perfectly reasonable. According to Kelly, then, our initial beliefs can affect the epistemic path we take, and thus what we end up believing.

The implication of both of these points is, of course, that it was reasonable for the participants in the Lord, Ross and Lepper experiment to be unequally critical of the evidence. I do not think that Kelly's argument successfully proves this. The first concern – that we cannot be expected to give all evidence equal considerations – seems to me to be right, but it also seems to be incomplete. It is true that confirming evidence when it is presented to us by itself does not necessarily warrant excessive scrutiny. On the other hand, when we do come across disconfirming evidence, it ought to cause us to re-evaluate our initial positions. When I come across good evidence that someone I previously considered honest has been dishonest, I may interrogate that evidence critically, but I ought also to re-look at my initial belief. The new evidence calls into question the sincerity of previous examples of honesty, for example.

In terms of the second concern, I think that in the Lord, Ross and Lepper study, the contradictory evidence ought to have caused the participants to examine whether the hypothesis they started with was the right one. Again, the evidence was designed to be good. It is perhaps alright for the participants to have been critical of disconfirming evidence, but this does not mean that they were

[54] Kelly, 'Disagreement, Dogmatism, and Belief Polarization', p. 623
[55] Kelly, 'Disagreement, Dogmatism, and Belief Polarization', p. 628

justified in treating the evidence in as skewed a manner as they did. To phrase it as I did a few paragraphs ago, the "salient discordance with the world"[56] was present.

One might also argue that the participants were not actually being rigid when they responded to the evidence that was given to them, because the evidence that was given to them was limited. It was to do with deterrence – the studies showed that capital punishment was either effective or ineffective as a crime deterrent. People might not change their minds on capital punishment in response to this evidence because they have separate reasons for believing capital punishment to be right or wrong. It might be right or wrong separately from its efficacy in deterring crime. This does not, however, change whether or not it *is* a deterrent to crime. Someone who wanted to argue against capital punishment based on other reasons is justified in doing so, but this should not influence how they respond to evidence that *does* relate to efficacy – except insofar as it allows them to dismiss it as irrelevant. This was not, however, what the participants did.

3.2. The Virtue

Given how virtues work, the epistemic virtue I am looking for will fall between gullibility and rigidity. It will involve being responsive to new evidence, but not to the extent that one fails to critically engage with the evidence, and ends up giving up on beliefs too easily.

W.V. Quine and J.S. Ullian describe a virtue which seems to me to be trying to fit the bill, though they do not phrase it in terms of our ability to make sense of new information from a foundation of background beliefs. They describe something called conservatism[57], a virtue which applies to a way of evaluating hypotheses. They claim that when we develop a hypothesis to explain new (or existing) information or phenomena, it may be the case that "In order to explain the happenings that we are inventing it to explain, the hypothesis may have to conflict with some of our previous beliefs; but the fewer the better. Acceptance of a hypothesis is of course like acceptance of any belief in that it demands rejection of whatever conflicts with it. The less rejection of prior beliefs required, the more plausible the hypothesis – other things being equal."[58] This last claim is not something that one has to defend in order to claim that the fewer of our beliefs a hypothesis contradicts the better, but it is one that Quine and Ullian endorse. I will suggest below that their view is a little strong, and ought to be combined with an intellectual virtue that offsets the tendency towards rigidity that I think this claim endorses.

[56] Champagne, 'Disjunctivism and the ethics of disbelief', p. 154
[57] This is the term they use.
[58] Quine and Ullian, *The Web of Belief*, p. 40

Adapted to fit responses to new evidence, and interpreted from the perspective of a web of belief view of belief, conservatism as an intellectual virtue means that the best interpretation of new evidence – the best hypothesis about what the evidence means – is the one which contradicts the fewest of our already-held beliefs. This seems to be an attempt at avoiding gullibility, but without falling into rigidity. Our previously held beliefs are given some standing, but Quine and Ullian do recognise that at least some of them may need to change.

This seems, at least initially, a plausible view. I do, however, have some concerns about using Quine's term. Firstly, though this is not in itself a reason to abandon the term, or the concept attached to it, the term conservatism as used here is not uncontroversial. There are various other views that could be called to mind by the term. In its simplest form, conservatism is taken to be the view that "an agent is in some measure justified in maintaining a belief simply in virtue of the fact that the agent has that belief."[59] David Christensen, D. Goldstick[60], and (to some extent) Hamid Vahid take this to be at least a version of the doctrine. Christensen and Goldstick see it as the paradigmatic example of conservatism, while Vahid adds two more versions. The first is that we should give up on a belief only when we have positive evidence that our justification for it is suspect, and the second is that we are justified in maintaining our own beliefs even when we become aware of evidentially equivalent alternative beliefs.[61] None of these are what I am looking for – and I do not think that they are what Quine and Ullian mean. Furthermore, I think that their definition is both the least problematic of the four, and the one which best captures the virtue I am trying to describe.

The first version – the view that beliefs are justified simply in virtue of being held – is not entailed by a Quinean picture of belief, despite the standing our already-held beliefs have on this account. Conservatism primarily applies to new beliefs and hypotheses, and so does not directly entail that existing beliefs are justified simply in virtue of being held. One might think that judging new hypotheses by how many previous beliefs they contradict suggests that the already existing beliefs are seen as being justified simply in virtue of being held, but that is not the case. The new belief may be justified by its connection to other beliefs, but this does not mean that we are taking those previous beliefs to be justified just because we hold them. It might be the case that conservatism applies to already-held beliefs as well, in the sense that currently-held beliefs and hypotheses should ideally not conflict with each other. I'm not sure, however, that this would be saying more than that we do not like having contradictory beliefs. We could have loosely-held hypotheses – something like "I think this is probably how this sort-of works, but it contradicts some of my beliefs". This still involves the recognition that the contradiction is a problem. It also does not mean that the previous beliefs or

[59] Christensen, 'Conservatism in Epistemology', p. 69
[60] Goldstick, 'Methodological Conservatism'.
[61] Vahid, 'Varieties of Epistemic Conservatism', p. 102

hypotheses are justified in virtue of being held. A desire for coherence and a distrust of contradiction may have a role to play in indicating that a belief's justification ought to be re-examined, but it does not have anything positive to say about the justification of beliefs. A belief being coherent with other beliefs might give it basic plausibility, but it does not fully justify it to the point where disconfirming evidence ought to be ignored. More importantly, whatever justification it has is coming from its coherence with other justified beliefs, not from the fact that it is held.

In addition, this view does not take into account that we form false beliefs all the time. Holding a belief does not guarantee that one has justification for it. It could have been uncritically acquired, and it could have remained unexamined. I, at one point, formed the belief that Budapest was in the Middle East, and it was not until a friend was talking about his trip to Hungary that I realised that I was mistaken. I did not, even before the contradictory evidence I received through my friend's testimony, have a justification for that belief simply by virtue of holding it. Perhaps if I formed that belief based on some kind of evidence (even misinterpreted), that evidence would form a justification for the belief. Even if this is the case, the justification comes from the evidence, rather than from my holding the belief. One might argue that I cannot remember the evidence, but can assume that I had evidence at some point, which gives me justification for this belief. This seems to me to be a bit far-fetched, however. Being in this situation calls for us to suspend belief, perhaps while we look up the evidence for it, rather than to hold the belief as being justified. This is not to say that suspending belief is necessarily the right course of action in any situation where one becomes aware of an alternative. I have argued that becoming aware of good evidence for an alternative ought to cause us to examine the belief further. Nonetheless, in the case where one is presented with evidence against a belief that one cannot summon any justification for, I think it is the right course of epistemic action.

It might seem as though Quine is committed to at least a weaker version of Vahid's second version of conservatism – that we should give up on a belief only when we have positive evidence that our justification for it is suspect. Re-arranging our belief-webs under the virtue of conservatism might justify the view that it is gullible to rearrange those webs in the absence of some kind of evidence that we should. This is weaker than Vahid's claim, but does involve the requirement that it be positive evidence that causes the change in belief-webs. I am happy to agree with this to some extent, but I think that some clarification of what counts as evidence that we should rearrange our belief-webs is needed.

This version of conservatism, however, also seems to me to be problematic. It ignores the connections we have between our beliefs. It is not simply the justification for one belief that has an impact on whether or not we should hold it. If other beliefs are connected to that belief, changes or challenges to them can have implications that are at least relevant for that belief.

In addition, I would argue that disconfirming evidence or strongly justified opposing positions are good enough reason to re-open the question of a particular belief, in the sense of re-considering and re-weighing up evidence. One might end up holding the same belief one did before, but it has at least been examined in the light of new evidence. Furthermore, realising something problematic about a belief might be enough to call for it to be re-examined. If, for example, one realises that one's belief is in conflict with another belief – whether factual or value-based – one ought to examine the beliefs in question again. The point of Quine's web of belief is that we can choose to re-examine other beliefs rather than the one the evidence is, strictly speaking, relevant to. We can, for example, choose to re-examine our belief in the efficacy of the evidence. I think, however, there are likely to be particular beliefs that certain sets of evidence are particularly pertinent to. A DNA test proving that X is Y's parent ought to cause Y to re-examine the belief "X is unrelated to me" rather than immediately cause a different revision, such as "the person at the lab is trying to make me believe that X is my parent". The evidence is far more pertinent to the former belief than it is to the latter. It is quite possible, however, that if Y particularly dislikes X, they may end up forming the latter belief, rather than changing the former. There may be some cases where it is the case that the DNA test has been compromised, for example. Unless one has reason to think that this is the case, the belief that the evidence is particularly pertinent to is the one that we think ought to change. This does not necessarily mean that in all cases the belief will have to change – some evidence is not particularly strong, or can be open to more interpretations than, a DNA test. Nonetheless, it is often the case that we are aware of which beliefs evidence is pertinent to, even if there is not a clear-cut answer to what our final answer with regard to what to do about the belief is.

It might also seem that the fact that Quine advocates avoiding the re-arrangement of one's belief-web as much as possible means that he is committed to Vahid's third version of the thesis – the claim that we are justified in maintaining a belief despite being aware of evidentially equivalent alternatives – but I do not think that this is the case. Good evidence supporting a competing view, or even the presence of disagreement, gives one reason to at least re-examine the justification of one's own belief, as well as to examine the justification for the belief supported by one's opponent, or the disconfirming evidence. We perhaps should try to avoid re-arranging our belief webs, all things being equal – but the presence of an evidentially equivalent alternative is a sign that all things may not be equal, and should lead us to take another look at the justification available. Once we have examined the competing position, if we have found it wanting, it may still be the best course of action to hold on to the initial belief. Nonetheless, even negative evidence of this sort is relevant to our beliefs. If I have always believed that running is entirely good for you, and I come across evidence that it can actually be pretty bad for your knees, I have reason to look at my belief again. I may still subsequently

decide that, all things considered, running actually is pretty good for you, but the evidence has caused me to re-examine the belief. This is not direct evidence against the cardio-vascular benefits of running, but it affects my belief.

Finally, this version of conservatism does not seem to me to be relevant to a question about epistemic virtue. There may be some cases where it is permissible to hold a belief steady in the face of evidentially equivalent alternatives – the question of belief in a divine being is one example. It does not, however, have much bearing on how we ought to tend to behave towards evidence. It does not give an answer to the question I am asking – namely what kind of intellectual virtue might be relevant to interpreting evidence in the interests of avoiding both rigidity in ones beliefs, and gullibility.

The fact that there is confusion around a term is not, of course, reason by itself to stop using the term. One option, when one finds oneself with competing definitions for a term, is to simply pick the best definition. I have just argued that Quine and Ullian's definition not only best fits the picture of belief that I have set out, it is also the most plausible one.[62] I have suggested that we need to make sense of new evidence from the perspective of what we already believe, and that we need to use our previous beliefs to test new ones. If that perspective takes the form of a set of interconnected beliefs, some central and some peripheral, it is reasonable to suppose that new evidence, or a hypothesis to explain new evidence, would fit somewhere into this web. Given that we try as much as possible to keep our beliefs consistent within this web, the fewer beliefs a new belief or hypothesis contradicts, the easier it will be to slot into our belief-webs. Furthermore, if our belief-webs are generally fairly accurate, or if we have good justification for the beliefs we already have, then saying the fewer existing beliefs a new belief or hypothesis contradicts the better simply means that a new hypothesis that contradicts fewer *justified* beliefs is better than one which contradicts more. This, it seems to me, makes much more sense than any of the alternative definitions of conservatism do.

The version of conservatism that Quine and Ullian use fits well with the Quinean model of belief – terminological confusion is not a good reason to dismiss it. What worries me more, however, is that the term only captures part of what I am after. For one thing, it seems unable to account for the role of importance in fixed belief. If both the centrality and the importance of a belief play a role in its fixed nature, appealing simply to how the interconnected nature of belief makes sense of how we ought to respond to evidence does not give us a very clear idea of how to respond to the role of importance in fixed beliefs. Furthermore, it seems to me that it captures the sense in which we should not be gullible, but it is less easy to see how conservatism avoids rigidity. Quine and Ullian's definition seems to me to be focused mainly on avoiding the possibility of error that might come in with dramatic changes to our belief-webs – such as the acceptance of hypotheses that do contradict our beliefs. They

[62] Perhaps unsurprisingly, since the account of belief is largely based on a Quinean picture of belief-webs.

argue that "The truth may indeed be radically remote from our present system of beliefs, so that we may need a long series of conservative steps to attain what might have been attained in one rash leap. The longer the leap, however, the mere serious an angular error in the direction. For a leap in the dark the likelihood of a happy landing is severely limited."[63] Their focus on avoiding error suggests that, while they are recognising the importance of the role of the background web of belief in interpreting new evidence, they are not as concerned with finding the mean between gullibility and rigidity. I worry that conservatism falls too much to the rigid scale of the spectrum. With this in mind, I want to look at another intellectual virtue that might answer the question of when it is and is not justified to hold beliefs steady.

James Spiegel, in his paper, 'Open-Mindedness and intellectual humility', argues that there are two related intellectual virtues that play a role in prescribing how we ought to respond to evidence – namely open-mindedness and intellectual humility.

Spiegel bases his definition of open-mindedness on that of W. Hare. On their view, "To be open-minded is...to be critically receptive to alternative possibilities, to be willing to think again despite having formulated a view, and to be concerned to defuse any factors that constrain one's thinking in predetermined ways".[64] We can hold strongly to individual beliefs unless given a reason to doubt them, but we take the attitude that we could be wrong, remaining open to the possibility that we might need to revise those beliefs. Open-mindedness is, for Spiegel, the mean between dogma and gullibility. He argues that "[o]n the one hand, we should aim to avoid automatic dismissal of all views that conflict with our own. On the other hand, we should not be so willing to embrace new ideas that we have no real convictions."[65] Spiegel argues that this virtue is closely tied to that of intellectual humility – seeing oneself and one's intellectual talents relatively accurately – and thus recognising the fallibility present in humans as believers. I take it this attitude towards ourselves is often what causes us to be aware of the fallibility of our beliefs as a system, rather than necessarily calling individual beliefs into question. We recognise that some of our beliefs are likely false, and remain open to this possibility, but this does not necessarily reduce our conviction when it comes to individual beliefs.[66]

This intellectual virtue captures well the balance I am wanting to strike between rigidity and gullibility but it does not capture the idea of the embedded nature of belief. I think perhaps what I'm after is something like open-minded conservatism, though that term seems somewhat contradictory. I am after something like open-mindedness, but with a recognition of the embedded nature of belief,

[63] Quine and Ullian, *The Web of Belief*, p. 41
[64] Hare, 'The ideal of open-mindedness and its place in education', pp. 4-5, in Spiegel, 'Open-Mindedness and Intellectual Humility, p. 28.
[65] Spiegel, 'Open-Mindedness and Intellectual Humility', p. 29
[66] Spiegel, 'Open-Mindedness and Intellectual Humility', pp. 33-34

and the role it plays in evaluating new information. This involves both conservatism and open-mindedness. I am undecided about whether it is the case that these are two separate virtues which work together closely to form a virtuous approach towards new evidence, or two aspects of one virtue. It probably does not make a great deal of difference which of the two is the case. Each would be needed to find the balance between rigidity and gullibility. I am roughly inclined to think that they are one virtue, and will continue to talk as though this is true, but I do not think that anything I say will be incompatible with the view that they are actually two virtues that work together. What I am certain of is that the vices attached to the virtue I am looking for are rigidity or dogma, and gullibility. I will use the term rigidity, because I think it best captures the fixed nature of the beliefs I am interested in. I will – and have so far – appropriate the term gullibility from Spiegel, as it perhaps better captures the nuances of changing ones belief too easily in response to new evidence or argument.

Open-minded conservatism is, as an epistemic or intellectual virtue, concerned with how we inquire. I think that this is mainly to do with our belief webs – with the centrality of a belief. Its justification has to do with the role of previously beliefs in making sense of new evidence, and our inability to interpret the world without the benefit of what we already know. Affective states do, however, play an important role here in that they attune us to the world in the way Jaggar, de Sousa, and Goldie describe. Emotions, for example, draw our attention to which features of the new evidence are important for previously held beliefs – particularly when those beliefs are value-based. If, for example, I am confronted with evidence that suggests that marriage equality is correlated with higher divorce rates, my emotional response against the challenge to marriage equality is likely to be part of what draws my attention to the fact that this evidence is challenging a deeply-held, value-laden belief. Emotion also has a role to play when it comes to the open-mindedness element of the open-minded conservatism. Part of what it means to be epistemically open-minded and humble, is that one needs to be aware of the role that emotions play in informing us about the world, but one also needs to be aware of the role they can play in leading us astray. Finding the virtuous mean between gullibility and rigidity is going to involve forming the tendency to listen to emotion where it is necessary, but not to let it control one's epistemic life.

Whether an instance of holding steady beliefs is a case of open-minded conservatism, gullibility or rigidity is something that will need to be determined on a case by case basis. It does seem, though, that it may be possible for individual instances of the phenomena to be justified under this picture. On the other hand, it seems that hyper-criticality, ideé fixe, and polarisation do seem to be primarily rigid ways of engaging with the world. Being hyper-critical of evidence seems to me to generally tend towards being rigid, as it means that, by definition, one is unlikely to give up on the belief. Polarisation seems to be a result of rigidity, rather than a cause of it. One does not take evidence

against one's belief to support it unless one is already rigidly holding onto that belief. Ideé fixe, it seems to me, is the only one of the three phenomena that could sometimes be justified under this picture, in cases where there are beliefs that we ought to hold steady, perhaps. Ideé fixe involves holding a belief steady in the face of counter-evidence, which seems on the surface to suggest that this phenomenon involves a tendency towards rigidity. On the other hand, if there are circumstances where it is justifiable to hold them steady, then it is possible to engage in ideé fixe without being epistemically vicious.

On the picture I have set out, then, it is not rigid to hold onto central and/or important beliefs, insofar as holding onto them is a result of using previously held beliefs as tools to interpret and judge new evidence. When we start moving from doing this to letting our previous beliefs interfere with the genuine weight of the evidence, it becomes problematic. As an intellectual virtue, open-minded conservatism applies most appropriately to the centrality of beliefs, but importance can affect it as well. It can either aid us to avoid gullibility, or push us towards rigidity. The phenomena tend towards rigidity, but it is in principle possible for them to be virtuous on this account. What I have not done yet is show where this account fits into the broader literature on epistemology.

Chapter 4: A possible objection: do fixed mental states count as beliefs?

In the first three chapters of this thesis, I have narrowed the broader term "confirmation bias" down to find the elements I am interested in – namely hyper-criticality, ideé fixe, and belief polarization. I have looked at how these phenomena might relate to our belief webs, and how they might be affected by affective states, as opposed to purely epistemic ones. In this chapter, I will examine a possible objection to the picture that I have set out thus far. It is a common view in the literature on belief that in order to count as a belief, a mental state has to be evidence-responsive. If this is true, it is possible that the mental states I have been talking about are not beliefs. If this is the case, one might think that the epistemological interpretation I have provided of these mental states is rather misguided. One perhaps cannot, for example, talk about epistemic virtues and vices with regard to mental states which are not beliefs. In this chapter, I will try to counter this objection by looking at the literature on fixed beliefs.[67] I will discuss Grace Helton's view that fixed beliefs do, in fact, count as beliefs. Given this, I will try and spell out roughly what it might mean to say someone has a fixed belief, and how we might tell this. It is worth stating from the outset than I am not doing metaphysics here. I am interested in the everyday ways in which we experience, and talk about, belief.

4.1. Do steady beliefs count as beliefs?

I have so far been assuming that the phenomena – particularly ideé fixe and hyper-criticality – apply to beliefs. I have been assuming, essentially, that holding a belief steady does not mean that it is not a belief. It is commonly held in the literature about beliefs, however, that in order to count as a belief, a mental state has to be responsive to evidence. Nikolai Viedge sets out the argument for this claim as follows:

1. "Beliefs are mental states that are governed by truth.
2. To be governed by truth is to be evidence responsive.
3. Therefore, evidence responsiveness is a necessary feature of beliefs such that if a mental state is evidence non-responsive it cannot be a belief."[68]

Under this view, it seems that evidence-resistant beliefs cannot count as beliefs (or fixed beliefs, I will use the terms interchangeably). There are presumably nuances, but I am specifically interested in beliefs that are fixed due to hyper-criticality – namely beliefs that are resisting evidence. If this is the

[67] I am referring here to beliefs which are held steady in the case of evidence, not beliefs about whether or not certain characteristics, such as intelligence, are fixed.
[68] Viedge, 'Defending Evidence-resistant Beliefs', p. 2

case, it is possible that what I have been calling beliefs that are held steady are not, in fact, beliefs, but rather delusions, or some similar mental state. Ideé fixe is, after all, the phenomenon of holding beliefs steady in the face of evidence. Hyper-criticality is a way of going about this. These phenomena are, presumably, not the only way of going about having a fixed mental state, but they certainly seem to be one way of doing so. If fixed mental states do not count as beliefs, then mental states which are prone to these phenomena do not either. As Viedge argues, however, it seems that there are some beliefs which fail to be responsive to evidence, and yet which do seem to be beliefs – namely bigoted beliefs such as racist, sexist, and sexually prejudiced ones. Viedge's intuition – one I share – is that these mental states do count as beliefs. One reason to think this might be that we tend to treat these kind of mental states as beliefs. We think that they ought to be held accountable to the norms of belief – we think, in other words, that they *should* respond to counter-evidence.[69] The fact that we treat something as a belief does not necessarily mean that we can say that it definitely is a belief. On the other hand, it does give us some reason to think that perhaps these evidence-resistant mental states are in fact beliefs.

More strongly, Viedge argues that evidence-resistant mental states ought to be counted as beliefs because they meet the other defining qualities of belief – they are context-independent and influence other beliefs and mental states.[70] To say that a belief P is context-independent is to say "that a belief that *p* governs the behavior of S in all contexts where *p* is relevant."[71] So my belief that I am allergic to alcohol will lead me to avoid drinking alcohol in numerous different situations, to refuse brandy-soaked Christmas pudding, etc. A different kind of mental state, such as putting Appletiser in a champagne glass and imagining that it is actually champagne, would not lead me either to treat Appletiser differently in any other situation, or make me drink champagne in a different situation, because I did not react to the Appletiser. It is only within that particular imagining that my behaviour towards Appletiser changes in any way. Similarly, a racist, sexist, or sexually prejudiced belief is likely to have an impact on one's behaviour outside of any particular context. It might, for example, cause one to avoid spending time with certain people, or it might cause one to have certain responses to the sight of gay couples with children, and so on. In terms of the second criterion, beliefs are able to be used as a basis for inferences that allow one to form other beliefs (or, presumably, other mental states such as attitudes).[72] So my belief that I am allergic to alcohol is the basis of my belief that I should not eat the Christmas pudding containing brandy, for example. Similarly, someone's belief that

[69] Viedge, 'Defending Evidence-resistant Beliefs', p. 11
[70] Viedge is using Van Leeuwen's conditions here. For the original paper, see Van Leeuwen, 'Religious Credence is not Factual Belief'.
[71] Viedge, 'Defending Evidence-Resistant Beliefs', p. 12
[72] Viedge, 'Defending Evidence-Resistant Belief', p. 14

having gay parents is harmful to children is likely to influence further beliefs, such as what adoption rights gay people should and should not have. It is possible, of course, that there could be fixed mental states that fall under racism, sexism, or sexual prejudice, that do not meet these criteria. In that case, I would imagine that the mental state in question does not count as a belief. On the other hand, it seems to me that in the majority of cases, the beliefs that Viedge is discussing – and the beliefs that I am interested in – are going to meet these criteria.

It seems, then, that it is possible for beliefs to be evidence-resistant and yet still count as beliefs. The problem then is how to respond to the argument given above for the claim that because beliefs are directed in some way at truth, they have to be evidence-responsive in order to count as beliefs. To put it a different way, the question of how beliefs can be both truth-directed and evidence-resistant remains.

Grace Helton, in an unpublished paper, gives what I think is a very convincing answer to this question (one Viedge endorses in the paper I have been referring to). She argues that it is true that for a mental state to count as a belief, it has to be in-principle evidence-responsive. Because beliefs are governed by truth, they have to, in principle, respond to evidence, which is a guide to the truth or falsity of a belief. Helton argues, however, that an in-principle responsiveness to evidence does not necessarily mean that a particular belief *will* change in response to evidence. It is possible, she argues, for the impact or relevance of the evidence on a particular belief to be masked, such that the agent does not change her belief in response to that evidence. The agent does not recognise the impact of the evidence in the same way she would were the evidence not being masked. Essentially, what it means to say that a belief is, in principle, responsive to evidence is to say that if the mask were not there, the belief would change in response to counter-evidence.

Helton phrases her argument for the claim that beliefs must be, in principle, revisable as a form of an 'ought implies can' argument. Her argument runs as follows:

1. "All beliefs are rationally required to be revised in response to conflicting evidence.
2. If some mental state is rationally required to be revised in response to conflicting evidence, then that mental state can be revised in response to conflicting evidence.
3. All beliefs can be revised in response to conflicting evidence."[73]

Mental states, then, must be, in principle, evidence-responsive in order to count as beliefs. Nonetheless, this does not mean that every mental state that counts as a belief will necessarily be revised in response to evidence. It is possible for the effect of the evidence to be masked. Helton explains this concept through the metaphor of glass. Glass can, in principle, break if it is struck with enough force. The same force, however, will not always break a piece of glass. If I drop a vase on a

[73] Helton, 'The Revisablity View of Belief', p. 2

tiled floor, for example, or hit it with something, it is likely to break. If the same vase is wrapped in a heavy blanket or bubble wrap, however, it might not break if dropped or struck.[74] Similarly, while beliefs, according to Helton's argument, must, in principle, be able to change in response to evidence, something such as strong emotion might mask this ability. In her words:

> For at least many beliefs in humans, the conditions which tend to facilitate rational belief revision are those in which all of the following hold: the belief and the evidence which contravenes it are both conscious and attended; the belief is not underpinned by strong emotion; and the subject enjoys available processing capacity. Correspondingly, for such beliefs, typical masks of the capacity to be revised will include conditions in which: the belief or the evidence which contravenes it are unattended or non-conscious; the belief is underpinned by strong emotion; or the subject lacks available processing capacity.[75]

If one of these masks – or, for that matter a mask that is not on the list – is in place, then the belief is less likely to change in response to evidence, even though it, in principle, can. The belief is still, in principle, revisable, because if the mask were not there, the belief would change in response to the evidence. It does not in fact change, however, when the belief is masked.

Helton does not think that the list of possible masks she outlines here is necessarily an exhaustive one. She does not go into much detail about how the masks might work, or how they might relate to each other. I am not terribly interested in the last one – the lack of ability to process the evidence. Helton spells this out in terms of something like the inability of someone who does not read Mandarin to spot a glaring error in a Mandarin to English translation – we simply cannot expect the person to do that. She does not have the capacity to, because she does not speak one of the languages.[76] She is not rationally required to do so. Similarly, someone who is not able to understand a very complex scientific article perhaps cannot be expected to understand its impact on a particular view she holds. Say something in a paper about complex physics means that a particular view of causation cannot be true, for example. An agent, A, with that view of causation, might read an article which deals with that particular section of science, but which does not specifically discuss the view of causation. A perhaps cannot be expected to draw the connection between the science and the view of causation, if she does not understand the science particularly well.[77] The impact of the evidence is masked to the agent, as she does not understand its implications, but she is not being evidence-

[74] Helton, 'The Revisability View of Belief', pp. 8-9
[75] Helton, 'The Revisablity View of Belief', p. 9
[76] Helton, 'The Revisability View of Belief', p. 15
[77] If the conclusion of the paper is to do with her view, then perhaps one might argue that the epistemic authority of a peer-reviewed scientific article might give her some reason to change the belief, but if it is an indirect result, as in this case, I do not think the same can be said.

resistant in the way that I am interested in. Furthermore, I think it is unlikely that this kind of masking is particularly prevalent when it comes to sexually prejudiced beliefs (or other kinds of prejudicial beliefs for that matter). On the other hand, I think that the other two masks Helton mentions – the belief or evidence being unattended, or the belief being underpinned by strong emotion – are both particularly relevant to sexually prejudiced beliefs.

I think that Helton's interpretation of what is happening in cases of evidence-resistance is right. Furthermore, I think that in cases of ideé fixe, where beliefs are central and/or important, their centrality and/or importance serve as a motivation to mask counter-evidence we come across. When we engage in things like hyper-criticality, it seems to me that we are engaging in strategies aimed at masking evidence, in order to keep the beliefs steady. I diverge from Helton, though, in that I think that these factors can also be decidedly epistemically valuable. She may not be opposed to the idea, but it is not the focus of her paper. On my view, it is only when the impact of these affective states is not what it ought to be that the interplay between them and beliefs is problematic.

In the case of an important belief, where affective states are influencing beliefs in problematic ways, the importance of the belief serves as a mask. Helton points to emotion as a possible mask. I think that what I have said in Chapter 2 of this thesis can serve as an elaboration of how this could work. I have argued that importance gives us a motivation to hold beliefs steady – to engage in ideé fixe. I would argue that this fits rather neatly into Helton's picture. Emotional importance can make us less likely to appreciate the evidence – it is, after all, in order to avoid fully appreciating the evidence that we engage in hyper-criticality. It is possible that on Helton's view, some mental states that are held steady by virtue of being important do not count as beliefs – namely if they are even, in principle, incapable of being revised in response to evidence. I think, however, that in many cases, the beliefs that I am interested in are held steady in practice, rather than in principle. If the beliefs were not as emotionally important as they are, it seems likely that they would change in response to evidence. Whether or not this is true is, of course, an empirical question.

It is harder to see how centrality might count as a mask. Roughly, though, if a belief is central, and we come into contact with counter-evidence, in causing us to evaluate the evidence differently, the belief might be seen as being masked by the structure of the other beliefs of the agent in question.

Essentially, I think that the ways in which importance and centrality can motivate one to engage in ideé fixe, and thus hyper-criticality, perhaps leading to polarization, could be seen as masks in Helton's sense. Hyper-criticality is a way of engaging with evidence such that the masks which protect the belief being challenged stay in place, leading to ideé fixe. In combination with the battlefield attitude towards argument, this could lead to polarization.

I am not sure whether Helton and I would necessarily agree on which mental states count as beliefs. I am not sure, for example, whether Helton would see what I have been calling polarized beliefs as beliefs, rather than delusions. The irrational element of a belief getting stronger in the face of conflicting evidence may, on Helton's view, disqualify the mental state from being a belief, and make it a delusion instead. I would argue that it is still the case that they are in principle evidence responsive because if the mask in question were not in place, the belief would not have become polarized in the way that it did. It is going to be a matter of fact, though, whether and when polarized beliefs do change, and what they change in response to.

4.2. The "fixed" element of fixed beliefs.

I have suggested that beliefs which are subject to the phenomena are a form of fixed belief. I have agreed with both Viedge and Helton that fixed beliefs do count as beliefs, and not some other kind of mental state. I now want to specifically spell out what I think makes something a fixed belief. I will then briefly look at how we might be able to tell that someone has a fixed belief, though I do not have a definitive answer to that question.

Part of what makes it difficult to tie down what counts as a fixed belief is that there are so many different beliefs which do not respond to counter-evidence, but which are all evaluated differently by our current epistemic standards. Person A and Person B from the example of the debate I mentioned in Chapter 1 each have fixed beliefs and engage in ideé fixe and hyper-criticality. I am unwilling to give up on my belief that 2+2=4. Someone who is racist or sexually prejudiced is unwilling to give up on their racist or sexually prejudiced beliefs. I am also unwilling to give up on my belief that racism and sexual prejudice are both wrong – both morally and epistemically. It is not entirely clear whether all of these beliefs count as evidence-resistant.

The sexually prejudiced person has a belief which does not respond to evidence (at least in the cases I am interested in). The difference between her prejudiced belief, and the belief that 2+2=4, however, is not entirely clear. It is not enough to say that she should give up on one but not the other, because that still does not answer the question of what it is about the two kinds of beliefs that are different, and what they have in common. To put it slightly differently, neither kind of belief changes in response to what we would, at least in some situations, consider evidence. In the former case, the sexually prejudiced person perhaps has a belief that the children of gay parents are missing a vital component of their childhood. This belief might not change in response to a social science paper that evaluates the happiness and/or functionality of children of gay parents versus the children of straight

ones[78], and finds that there is no difference. In the second case, the belief that 2+2=4 does not respond to observational evidence. Normally we would consider both observational evidence and a social scientific study as constituting evidence – though one difference is that we would think the sexually prejudiced person's belief should change (normatively speaking), but we would not expect 2+2=4 to change. Given that both count as evidence, part of what I am interested in is why we think the former should change, but not the latter. I do not think it can simply be a case of one being right. Something that seems to be good evidence by normal standards presumably should give an agent, at the very least, a first-person reason to believe, even if it later turns out that the evidence was wrong. Finally, it is not clear what the difference is between my fixed belief that sexual prejudice is wrong, and the sexually prejudiced person's belief that homosexuality is wrong. There is a moral difference, but it is not clear yet whether there is an epistemic difference (beyond the fact that I believe that as a matter of fact I am right and the sexually prejudiced person is wrong). Furthermore, if there is an epistemic difference, it is not clear how that ought to be spelled out.

Given the previous chapters of this thesis, it may be fairly easy to see what the essence of my view on fixed beliefs is going to be. A fixed belief is, at its core, one which is rigid, rather than open-mindendly conservative. This means, strangely, that beliefs which are fixed in the face of counter-evidence can still fail to count as fixed beliefs. In order to count particularly as a fixed belief, the believer has to hold that belief steady in the fact of evidence in such a way that she is being rigid, rather than using her background beliefs to interpret and judge new evidence. She might also count as having a fixed belief if her affective states are making her rigid – masking evidence, rather than attuning her to the world.

On this interpretation, mathematical beliefs such as 2+2=4 are not fixed beliefs, though they do not respond to evidence. They are held steady in the interest of avoiding gullibility. Our already-held beliefs about mathematics, the level of evidence that our epistemic standards require for changing a belief as central as this, and our knowledge of the effectiveness of mathematics in describing the world, all support the belief that 2+2=4. Resisting observational evidence is not yet rigid. There may, however, come a time when failing to revise (or give up on) the belief that 2+2=4 does become rigid. There is nothing about it that protects it from this possibility. If enough evidence mounts up to suggest that we ought to revise it, or even give it up, then failing to do so is likely to be rigid.

Mathematical beliefs are thus not fixed beliefs. They are central, and thus held in the face of contrary evidence, but they are not rigid. The sexually prejudiced person's beliefs, and mine, however,

[78] This is a factual belief, which is part of a sexually prejudiced world view. It brings with it value judgements, as well as implications for other beliefs, such as whether gay people should be allowed to adopt children, etc.

may be – as may Person A and Person B's. In each of our cases, the centrality of, and the effect of our affective states on, our beliefs means that we are not engaging with each other's evidence seriously. This sounds more like a tendency towards rigidity than open-minded conservatism. While this definition allows us to draw conclusions about these kinds of beliefs, however, it does not give us a guideline which is always going to give clear answers to whether a particular belief is fixed or not. It is sometimes easy to tell whether or not someone is being rigid – it is easy, for example, to say that the person refusing to change a mathematical belief because of a disappearing sock is not being rigid – but it may not be so easy with less clear-cut beliefs. I will briefly touch on the kind of things that might give us a clue as to whether people are being rigid, but I do not think they are definitive.

One option is that a rigid belief is one which does not change in response to evidence which would be strong enough to cause the agent to change other beliefs. So if someone has a belief that members of a certain race group are less intelligent than members of another, they might not respond to the overwhelming evidence to the contrary - for example, the numerous studies within psychology and biology that show this not to be true. On the other hand, they would likely be convinced by the same kind of studies which showed a different conclusion. If this is the case, then we can perhaps say that this belief is rigid. We cannot say, given this as an identifying quality of fixed beliefs, that someone who just does not accept that social science is good evidence is being rigid. They might not have a very good epistemic system, but the problem would lie elsewhere. Rigidity comes in when there is a *kind* of evidence which convinces someone in the case of some belief, but not in the case of others. This criterion is, I think, helpful. If a piece of evidence is being treated differently for no apparent reason, it is a clue that something problematic is going on. On the other hand, we do not necessarily have access to the details of why someone is resisting a particular kind of evidence. Furthermore, there may be reasons why someone is resisting a particular piece of evidence that takes it out of the realm of rigidity – perhaps their emotional response, for example, is actually telling them something about the world that we are missing. These kind of considerations mean that this criterion is not enough to tell when someone is being evidence-resistant, or when they have a non-rigid fixed belief.

Another option[79] is that a rigid belief is one which does not change in the face of evidence that the epistemic community thinks ought to inspire change.[80] I take it that the epistemic community would serve as a measure for standards for evidence rather than dealing with particular pieces of

[79] This section of my view was developed partly in conversations with Nikolai Viedge, and I cannot claim full credit for it. He also gave a conference presentation at the Philosophical Society of Southern Africa's annual conference, held in January 2017, which influenced my discussion here.

[80] I do not think that seeing this as a possible way of telling whether or not someone has a rigid belief involves assuming that the only standard for how we ought to respond to evidence is inter-subjective, and dependent on one's epistemic community. The epistemic community sets standards which are generally used to judge people's responses to evidence, but it does not set the standards of evidence entirely.

evidence. So, for example, the epistemic community would see social science studies, which have been peer reviewed, and meet certain criteria, count as good evidence and, other things being equal, one should take those kinds of studies as good evidence. Again, this is useful. We do tend to rely on the standards of our epistemic community. On the other hand, we want to be able to say that the epistemic community can be wrong about whether something counts as good evidence. Evidence that the Earth went around the sun was still evidence, even if the epistemic community at the time of Copernicus or Galilei didn't think so. Evidence that there was no essential difference between black and white people was still evidence, even in communities which refused to accept this. Similarly, before the invention of the term sexual harassment, the epistemic community was missing something in their descriptions of the possible interactions between men and women. Here I am perhaps being a little unfair, in that I am judging retrospectively, using the standards of my epistemic community, rather than the standards of the time. That, however, might excuse individuals within that epistemic community without claiming that the community itself was right. It is specifically their beliefs that are excusable here, rather than their actions. The person sexually harassing a woman or women was still doing something wrong – and presumably, given that the women were uncomfortable, he (or she) could, even at the time, have been expected to change his behaviour. It is specifically the epistemic resources of the community, and the explanatory beliefs people could be excused for failing to form, that I am referring to here. This makes me think that the standards of the epistemic community are simply indicators of when a belief ought to change, rather than a standard-creating entity – and furthermore, that it, like consistency – is not a solid standard.

I think, then, that whether someone's response to a piece of evidence is consistent with their overall responses to that kind of evidence, and with the standards of the epistemic community, gives us a clue as to whether or not they are being rigid. I do not think, however, that either of these factors are definitive at all – each is problematic. Furthermore, joining them together would not make them any more definitive – the problems with each are not offset by the other.

This lack of definitive criteria for rigidity, as opposed to open-minded conservatism, is partly due to the nature of virtues – arguing that something is a virtue does not get one to a list of things that count as being virtuous on that picture. Virtues give us a more fluid picture than the project of forming such a list would allow for. Given this, I am happy to settle for the rough criteria that I have set out here. Fixed/evidence-resistant beliefs, then, do count as beliefs. They are beliefs that are in principle evidence-responsive, but whose response to actual evidence is being masked. I have argued that beliefs that are affected by the phenomena are such beliefs, and that two possible masks are centrality and importance. Given this, I have tried to give an account of fixed beliefs which takes into account the role of these factors. I have argued that fixed beliefs are ones which resist evidence to the

point where they are rigid, rather than open-mindedly conservative. Given that engaging in the phenomena is one way of being rigid, beliefs which are prone to them fit into this picture as being a kind of fixed belief. This picture suggests that my picture can withstand the objection that the mental states that I have been talking about do not count as beliefs.

Conclusion

There are several questions suggested by this thesis which I have not had the space to consider. I have mentioned that I think the work I have done is relevant to combatting prejudice, particularly sexual prejudice. I have not yet been able to spell out exactly how. I have talked about the implications my view has for argument, but not how we might avoid the pitfalls that we encounter when trying to combat prejudice through it.

Firstly, I think that Helton is right to say that in the case of beliefs which are resistant to evidence, the impact of the evidence is being masked. Given this, there might be a place for using non-evidential means to get other people to change their minds without raising the problems that would normally need to be considered by someone engaging in such a project. The problem with using non-epistemic means as a way of convincing someone of a position, is that it seems to be a fairly problematic epistemic route. We tend to think that beliefs ought to be based on evidence, and so it is worrying to use emotional manipulation, for example, to change others' beliefs. If, however, one is engaging with someone else's emotions and attitudes in order to remove a mask that they have, then it seems that one is not, strictly speaking, emotionally manipulating someone into changing their belief. The emotional or attitudinal engagement would need to be combined with an evidence-based argument. Furthermore, engaging with people on an emotional, value-based, or attitudinal level could, rather than serving as emotional manipulation, draw their attention to features of the world, in the way Jaggar, de Sousa, and Goldie describe.

Engaging with people on an emotional, value-based, or attitudinal level might therefore be a way of engaging people on topics that might be prone to importance-motivated ideé fixe. It may, though, be necessary to engage with the person whose beliefs one is trying to change on an evidential level as well, in order to change someone else's belief and still remain epistemically justified.

Secondly, I have been focusing on sexual prejudice in this thesis – and particularly sexual prejudice towards gay men and lesbian women. In the interests of avoiding skating over important differences in the life experiences of, and attitudes towards, different groups, I have narrowed my focus. I do think, however, that much of what I have said would apply elsewhere – both to different kinds of sexual prejudice (prejudice against bisexual, transgender, intersex, asexual and queer people, for example), and to different kinds of prejudice. Expanding this account would be a valuable project.

Thirdly, I do want to say that there is a difference between my beliefs and those of the sexually prejudiced person – epistemologically as well as ethically. I find myself, however, even after this thesis, without the tools to do so justifiably – at least I do not yet have these tools. The sexually prejudiced person and I are each prone to uneven engagements with the evidence. I do think I'm right, but so does she. The epistemological differences between us, if any, still need to be spelled out, but I am

unsure of how to do that. Furthermore, the interplay between possible ethical and epistemological differences between us is also something that invites investigation. There seem to me to be some beliefs which it is right to hold steady, both morally and epistemologically. Beliefs that prejudice is wrong fall under this category.

Finally, much of what I have said is open to empirical investigation. I think that my view is at least plausible, but it touches on matters of fact, which need empirical investigation. This thesis is an outlining of how I think the phenomena might work – much of that picture could, and ought, to be tested.

There are still questions, then, that I think need to be answered, but which I cannot tackle in this thesis. What I have done, is argue that one of the challenges to combatting sexual prejudice is that people on either side of the debate, while they ostensibly engage with each other on the issues in question, tend to engage with the opposing evidence in order to reject it. I have argued that part of what might be going on here, is that participants in each side of the debate might be engaging in confirmation bias. After drawing out several sub-phenomena which I think fall under the broad phenomenon of confirmation bias, I narrowed my focus to ideé fixe, hyper-criticality, and polarization. I argued that the motivations for these phenomena can be found in the way our belief systems usually work, both in terms of their web-like structure, and in terms of the interplay between our beliefs, and affective elements such as emotions, attitudes, and values. Negotiating evidence in such a way that we respond to it, while still recognising the role played by the structure of belief, and the effect of affect on it, is, I argued, an epistemic virtue. Finally, I argued that my picture can withstand the objection that the mental states I have been talking about are not beliefs, arguing that they are fixed beliefs, in roughly the sense that Helton means.

References

1. Adler, J.E., (2002), *Beliefs Own Ethics*, MIT Press: Cambridge, MA
2. Carroll, A., and Itaborahy, L.P., (2015, May), 'State-Sponsored Homophobia, A World Survey of Laws: Criminalisation, protection, and recognition of same-sex love', ILGA (International Lesbian, Gay, Bisexual, Trans and Intersex Association), State-sponsored Homophobia Report (10th Edition), Accessed 01 November 2016 from https://www.google.co.za/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&cad=rja&uact=8&ved=0ahUKEwiJssyc44PSAhUKOsAKHZBSBI4QFggYMAA&url=http%3A%2F%2Fold.ilga.org%2FStatehomophobia%2FILGA_State_Sponsored_Homophobia_2015.pdf&usg=AFQjCNGNXQnPuX0O5vdhCXQ-IvlnissJnw&sig2=_TqadIVRaDM-IfRlIDPBEw&bvm=bv.146496531,d.d24
3. Champagne, M., (2015), 'Disjuncttivism and the Ethics of Disbelief', *Philosophical Papers, 44*(2), pp. 139-163, DOI: http://dx.doi.org/10.1080/05568641.2015.1056964
4. Christensen, D., (1994), 'Conservatism in Epistemology', *Noûs, 28*(1), pp. 69-89, DOI: http://dx.doi.org/10.2307/2215920
5. Clement, S. and Barnes, R., (2015, 23 April), 'Poll: Gay Marriage Support at Record High', *The Washington Post*, Accessed 10 November 2015 from https://www.washingtonpost.com/politics/courts_law/poll-gay-marriage-support-at-record-high/2015/04/22/f6548332-e92a-11e4-aae1-d642717d8afa_story.html?utm_term=.7ca69d88a04a
6. De Sousa, R., (2004), 'Emotions: What I know, What I'd like to Think I Know, and What I'd Like to Think', in Solomon, R.C. (Ed), (2004), *Thinking about Feeling: Contemporary Philosophers on Emotions,* Oxford University Press: New York
7. Dutton, S., De Pinto, J., Salvanto, A., and Backus, F., (2015, 23 June), 'Poll: Americans' views on same-sex marriage', *CBS (Columbia Broadcasting System) News*, Accessed 10 November 2015 from http://www.cbsnews.com/news/poll-americans-views-on-same-sex-marriage/
8. Falomir-Pichastor, J.M., and Mugny, G., (2009), '"I'm not gay...I'm a real man!": Heterosexual Men's Gender Self-Esteem and Sexual Prejudice, *Personality and Social Psychology Bulletin (Sage Journals), 35*(9), pp. 1233-1243, DOI: https://doi.org/10.1177/0146167209338072
9. Fricker, M., (2007), *Epistemic Injustice: Power and the Ethics of Knowing*, Clarendon Press: Wotton-Under-Edge
10. Garcia, J.L.A., (1996), 'The Heart of Racism', *Journal of Social Philosophy, 27*(1), pp. 5-46, DOI: https://doi.org/10.1111/j.1467-9833.1996.tb00225.x

11. Goldie, P., (2004), 'Emotion, Feeling and Knowledge of the World, in Solomon, R.C. (Ed), (2004), *Thinking about Feeling: Contemporary Philosophers on Emotions,* Oxford University Press: New York
12. Goldstick, D., (1971), 'Methodological Conservatism', *American Philosophical Quarterly, 8*(2), pp. 186-191, DOI: Unknown. Available from https://www.jstor.org/stable/20009395
13. Hare, w., (2003), 'The ideal of open-mindedness and its place in education', *Journal of Thought, 38*(2), pp. 3-10, DOI: Unknown. Available from http://www.jstor.org/stable/42589737
14. Helton, G., (2016), 'The Revisability View of Belief', Unpublished paper. Accessed on 12 December 2016 from https://www.academia.edu/9230105/The_Revisability_View_of_Belief
15. Herek, G.M., (2000), 'The Psychology of Sexual Prejudice', *Current Directions in Psychological Science (Association for Psychological Science), 9*(1), pp. 19-22, DOI: https://doi.org/10.1111/1467-8721.00051
16. Jaggar, A.M., (1989), 'Love and Knowledge: Emotion in Feminist Epistemology', *Inquiry, 32*(2), pp. 151-176, DOI: http://dx.doi.org/10.1080/00201748908602185
17. Jones, W.E., (2011), 'Philosophy and the Ethical Significance of Spectatorship: An Introduction to *Ethics at the Cinema'*, in Jones, W.E., and Vice, S. (2011), *Ethics at the Cinema,* pp. 1-19, New York: Oxford University Press
18. Kardash, C.M. and Scholes, R.J. (1996). Effects of preexisting beliefs, epistemological beliefs, and need for cognition on interpretation of controversial issues. *Journal of Educational Psychology, 88(2)* pp. 260-271, DOI: http://dx.doi.org/10.1037/0022-0663.88.2.260
19. Krioukov, D., Papadopoulos, F., Kitsak, M., Vahdat, A., and Boguñá,M., (2010), 'Hyperbolic Geometry of Complex Networks', *Physical Review E, 82*(3), pp. 1-18, doi: https://doi.org/10.1103/PhysRevE.82.036106
20. Kroeper, K.M., Sanchez, D.T., and Himmelstein, M.S., (2014), 'Hetersexual Men's Confrontation of Sexual Prejudice: The Role of Precarious Manhood', *Sex Roles, 70*(1), pp. 1-13, DOI: https://doi.org/10.1007/s11199-013-0306-z
21. Levine, M. (1970). Human discrimination learning. The subset-sampling assumption. *Psychological Bulletin, 74,* pp. 397-404, DOI: http://dx.doi.org/10.1037/h0032951
22. Lord, C.G., Ross, L., and Lepper, M., (1979), 'Biased Assimilation and Attitude Polarization: The Effects of Prior Theories on Subsequently Considered Evidence', *Journal of Personality and Social Psychology, 37*(11), pp. 2098-2109, DOI: http://dx.doi.org/10.1037/0022-3514.37.11.2098

23. Millward, R. B., & Spoehr, K. T. (1973). The direct measurement of hypothesis-testing strategies. *Cognitive Psychology, 4,* pp. 1-38, DOI: https://doi.org/10.1016/0010-0285(73)90002-9
24. New, M.J., (2015, July 21), 'In the Wake of Obergefell, Three New Polls Show Reduced Support for Same-sex Marriage', *National Review,* Accessed 10 November 2016 from http://www.nationalreview.com/corner/421443/obergefell-same-sex-marriage-poll-reduced-support
25. Nickerson, R.S. (1998), 'A Ubiquitous Phenomenon in Many Guises', *Review of General Psychology, 2*(2), pp. 175-220, DOI: http://dx.doi.org/10.1037/1089-2680.2.2.175
26. Pitz, G. F, Downing, L., & Reinhold, H. (1967). Sequential effects in the revision of subjective probabilities. *Canadian Journal of Psychology, 21,* pp. 381-393, DOI: http://dx.doi.org/10.1037/h0082998
27. Quine, W.V. and Ullian, J.S., (1970) *The Web of Belief*, Random House: New York
28. Quine, W.V., (1951), 'Main Trends in Recent Philosophy: Two Dogmas of Empiricism', *The Philosophical Review, 60*(1), pp. 20-43, DOI: http://dx.doi.org/10.2307/2181906
29. Quine, W.V., (1991), 'Two Dogmas in Retrospect', *Canadian Journal of Philosophy, 21*(3), pp. 265-274, DOI: http://dx.doi.org/10.1080/00455091.1991.10717246
30. Ratcliff, J.J., Lassiter, G.D., Markman, K.D., Snyder, C.J., (2006), 'Gender Differences in Attitudes Toward Gay Men and Lesbians: The Role of Motivation to Respond Without Prejudice', *Personality and Social Psychology Bulletin (Sage Journals), 32*(10), pp. 1325-1338, DOI: https://doi.org/10.1177/0146167206290213
31. Rorty, R. (1994) 'Truth Without Correspondence to Reality' in *Philosophy and Social Hope,* (1999), Penguin Books: London
32. Shelby, T., (2002), 'Is Racism in the "Heart"?', *Journal of Social Philosophy, 33*(3), pp. 411-420, DOI: https://doi.org/10.1111/0047-2786.00150
33. Spiegel, J.S., (2012), 'Open-Mindedness and Intellectual Humility', *Theory and Research in Education, 10*(1), pp. 27-38, doi: https://doi.org/10.1177/1477878512437472
34. Tweney, R. D., Doherty, M. E., Worner, W. J., Pliske, D. B., Mynatt, C. R., Gross, K. A., & Arkkelin, D. L. (1980). Strategies of rule discovery in an inference task. *Quarterly Journal of Experimental Psychology, 32, pp.* 109-123, DOI: http://dx.doi.org/10.1080/00335558008248237
35. Unknown author, (Unknown date), 'Growing up LGBTI in America: View Statistics', *Human Rights Campaign Website*, Accessed 10 November 2015 from http://www.hrc.org/youth/view-statistics/#.WJyswn9MiBl

36. Vahid, H., (2004), 'Varieties of Epistemic Conservatism', *Synthese, 141*(1), pp. 97-122, DOI: http://dx.doi.org/10.1023/B:SYNT.0000035849.62840.e8
37. Van Leeuwen, N., (2014), 'Religious Credence is not Factual Belief', *Elsevier/Cognition (133)* pp. 698-715, DOI: https://dx.doi.org/10.1016/j.cognition.2014.08.015
38. Viedge, N., (2016), 'Defending Evidence-Resistant Beliefs', *Pacific Philosophical Quarterly,* pp. 1-21 DOI*:* https://doi.org/10.1111/papq.12174
39. Wason, P. C., (1960), 'On the failure to eliminate hypotheses in a conceptual task', *The Quarterly Journal of Experimental Psychology, 12*(3), pp. 129-140, DOI: http://dx.doi.org/10.1080/17470216008416717
40. Wolfe, H.E., (1945), *Introduction to Non-Euclidean Geometry*, The Dryden Press: New York