

Appendix 2. An analysis of Poll results:

Strong polarizations as shown in the data at [DK1](#) are usually indicative of cultural influence at work, of alignment to worldviews as Dan himself notes. If we were truly objective when trying to identify the source of this influence, we wouldn't start by assuming that one culture was 'right' and the other not. And yet this is effectively what Dan has done within his analysis. But what if neither are right? Or the truth lies somewhere *between* the two poles? Plus Dan has started with a field of only *two* cultural players, of which he assumes one (Democrat) is *not* significantly biased by their worldview because they have a good grasp of an 'absolute truth' from climate science, despite this is an infant and highly contested field engaged upon a wicked problem. To make matters worse all the individuals that cultures might recruit, *including all the scientists* from whom Dan believes the truth emanates, are embedded within a highly malleable society that has for decades been soaked in emotive messaging regarding climate change. And scientists are no more immune to bias than anyone else. In such circumstances the received truth, climate orthodoxy if you will, should at least be regarded as suspicious. If this assumption produces a better psychological explanation that is more fitted to the various survey data, one can then draw the conclusion that climate orthodoxy is likely contaminated with misinformation. The differential shifts of emphasis from **Appendix 1** regarding people's beliefs plus resolve on the issue of global warming, are a very big clue as to *who* is influenced by *which* culture. (Cultures are notorious for propagating narratives that serve the culture and not veracity, which among other methods can be detected via gaps between stated belief and action, or will for action, within the constraint of real-world issues). Yet even before exploring a hot lead like this, one should really attempt to establish *who the likely players are*.

Dan has essentially *defined* that there are just two (opposed) main cultural (political) players, arranged around an absolute scientific truth. Yet if we assume per above that the received truth could well be contaminated, plus we search the social topography a little bit more thoroughly, we instead ought to be considering a field with at least three players arranged around a disputed truth. And furthermore, one of the cultural players is *not* a traditional political party. To keep this article from mushrooming I have to take a shortcut here: the above-mentioned posts [AW1](#) to [AW3](#) at [Watts Up With That](#) demonstrate that the climate Consensus is pretty much saturated with psychological effects, and as a consequence it is bulging with bias too. *This is the critical take-away from these posts* (rather than the additional conclusion of Lewandowsky's personal bias). And not only can this be shown using standard literature reporting mainstream effects within various populations, for theoretical support the posts [AW1](#) to [AW3](#) stick to papers on cognitive bias *exclusively from Lewandowsky and associated authors*. These authors are all *avid* CAGW advocates; hence there can't be any realistic possibility of counter (climate skeptic) bias from their papers. (And no minority psychological oddities like Dan's 'duality' are required within this explanation either). The level of Consensus bias, mainly from misinformation about the certainty of catastrophe, is high enough and coherent enough (a tight consensus is after all bound to be coherent!), and its effects influential enough, that the climate Consensus can be considered *a culture in its own right*. A culture that has gradually come to dominate environmentalism and also to have a major impact on government and society in general. A culture that at the very least should be a candidate player within our investigation, which may allow the interpretations of survey data to fall out better than they did for Dan.

So, our main players are the long established Democrat and Republican political cultures (leanings to which as Dan notes are somewhat fuzzy proxies for identity), and the nascent yet burgeoning (hence still more fuzzy) CAGW culture. Core adherents of the latter can self-identify as 'above' politics, yet all cultures are in the pragmatic game of social cross-coalitions, and necessarily therefore oppositions too.

Enabled by this wider vision and stoking our *innate skepticism* to protect us from leaning towards any concept of an ‘absolute truth’ as output from socially processed speculative science, we can revisit Dan’s data to see whether there’s a more fitted psychological explanation than his final [DK1](#) theory of ‘duality’ regarding the Rep/Cons.

The main device that Dan uses to separate *identity* from *knowledge* in [DK2](#) / [DK4](#) is very simple. Rather than asking folks directly what *they* believe, he asks them what they think ‘climate scientists believe’. As noted in the main body of the post, it seems that a similarly large majority from both political camps think that climate scientists believe all sorts of scary things about carbon dioxide and human caused global warming, even though some theories on his list are (deliberately inserted) baloney. While Dan is pained about the state of civic knowledge on the science, he interprets this data as showing that folks across the political spectrum have ‘*a widespread apprehension of danger*’, because ‘*the mistakes are all in the same direction*’, i.e. favoring all the scary stories. He proposes that this is an indication of ‘*a latent (unobserved) disposition to attribute to climate scientists the position “we are screwed if we don’t do something”*.’ By which I believe he means that: the public might be ignorant of the details, but they *believe it deep down (including the Rep/Cons)* when the climate scientists say we’re screwed.

However, this form of removing identity defense has likely also removed identification with respondents genuine thoughts. It is much more likely that respondents have *very literally* answered the question asked; i.e. their answers reflect *only* what they think the scientists believe, *but not what they believe themselves*. In a healthy moment of doubt, Dan considers this very possibility: ‘*Someone could say, reasonably, that asking people what they think “climate scientists believe” is different from measuring whether those people themselves believe what they [sic] climate scientists have concluded.*’

However he immediately rules this out because of the ‘discrepancy’ between the bi-partisan consensus regarding these questions, and the strong polarization regarding the more direct questioning of belief in global warming, per [DK1](#). I think his distilled logic is this: Regarding the strong polarization, especially of the science aware, the clear assumption is that the Dem/Libs are ‘right’, therefore it is the Rep/Cons who *must* be culturally steered to the opposite pole. Hence, when he believes he’s removed identity issues using the pre-ambule of ‘climate scientists believe’, he concludes that the Rep/Cons, who are now able to let their guard down and respond more personally, must essentially be *agreeing* that we’re in deep trouble just as the scientists state (even if supporters from both political camps appear to be very poor indeed at distinguishing the scientific wheat from the chaff regarding the details). Hence also, the puzzle of how the *more polarized science-aware* Rep/Cons, can apparently both believe and disbelieve simultaneously.

However, there’s a more plausible explanation. We start into this by assuming that Dan’s moment of doubt was a moment of insight. So the respondents in [DK2](#) are telling us *only* what they think scientists believe, but for most folks in *both* political camps this is *not what they believe themselves* (not even as some kind of ‘latent’ or ‘unobserved’ apprehension). After decades of being emotively battered by almost every alarmist scare imaginable, no matter how tenuously linked to Global Warming aka Climate Change, plus constant urgings to act regarding ever-elapsing deadlines of X years or months or days, this is hardly a surprise. And despite eliciting an unintended kind of answer, Dan’s plan to separate knowledge from identity has nevertheless still worked. Yet it is *not the Rep/Cons* who’ve let their guard down, *it is the Dem/Libs*. No longer constrained to defend their party in a direct challenge of identity, *many of them too* admit that climate scientists come out with all sorts of scare stories which are *not* particularly believable. This also helps to explain some of the terrible lack of discrimination regarding the scientific red herrings;

confidence in the credibility of climate scientists is *so low* in the opinion of *both* political camps, that they can each well believe that scientists actually *do* put out such stories as serious findings. For the bulk of Rep/Cons, this is more or less their normal public position regarding the state of climate science. Their response is consistent. Yet for *many* of the Dem/Libs this represents a significant shift from the party line of complete belief in the output of that favored discipline; in other words a weakening of their belief and a loss of resolve, because they are not directly challenged here to defend their party and associated identity.

We cannot know from [DK2](#) data alone how many of the majority respondents from either political camp were motivated to affirm the scary stories on their own behalf, or only on behalf of the climate scientists. But we do know from the surveys in **Appendix 1** (and many more) that diluting and contextualizing the tribalism of climate change via an alternate method, i.e. presenting within lists of other national issues, *does* result in weakened belief and resolve from the Dem/Libs about this ‘ultimate issue’. It is highly likely that the same effect is in play here, and at least to the same degree. Given that Dan’s method, while very simple, distances from identity *still further*, then the number of Dem/Libs who truly believe all the scare stuff *themselves* may be as low *or lower* than say the 25% who place Global Warming as their top priority in the PRRI / Brookings poll. The rest of the Dem/Libs *do not* truly believe. So the apparent bipartisan consensus is *not* driven by a widespread apprehension of climate danger (latent or otherwise), but *in large part* by a common lack of faith in climate science and *in lesser part* by the question design, which can’t distinguish between the two possible main motivations for affirmative responses (mainly for Dem/Libs). *Why* many Dem/Libs shift position, as posed above, is that *they are only true to their alliance with the culture of CAGW when they must be*, to defend their party line or worldview. Yet a majority of the rank and file are not convinced by the case for imminent danger of catastrophe, and this shows when there is sufficient distancing from identity defense and / or dilution among other real-world issues.

And does this gel with the polarization in [DK1](#)? I think so. For the science *unaware*, it is highly likely that for such direct questioning on this issue which is so tribal in the US, *both* sampled camps respond in defense of their cultural identity. If they are science and climate *unaware*, what else would they have to motivate or guide or them? How it *became* tribal is a different question. Maybe because the Democrats formed an early and particularly strong alliance with climate culture, the Republicans were motivated to react in the opposite manner; maybe because politics is more polarized in the US anyhow, this is what drove a different outcome to the UK say, where *official* support for the climate Consensus is strong within all the main political parties. Anyhow, one would expect polarized responses. However, one would also expect such folks to be not too sure of themselves on this topic of which they have little knowledge, and indeed the response bands are wide and overlapping, plus much less emphatic than for the *science aware* folks. Things get much more interesting when considering the latter, because for folks from both political camps *their initial path* to greater knowledge will in most cases *be steered by a similar starting bias* as for the science unaware. So in practice, science questing Rep/Cons and Dem/Libs will be set upon *different* paths of discovery, which therefore will lead to *dissimilar* caches of knowledge.

Questing science-aware Democrats will very quickly find themselves in an avalanche of scientific papers and articles from myriad sources, all fronted by a bow wave of *official* statements about Arctic sea-ice or surface temperature or energy accumulation in the deep oceans or whatever, from scientific bodies and governmental organizations. They will become familiar with some major currents, e.g. the importance of models, various paleo-climate proxies, the strength of the Consensus, the emphasis on policy and action, yet much of this avalanche is simply moving in sympathy with the core direction, e.g. papers on species harm that simply assume dire Global Warming projections *as their starting position*. Against this huge

intellectual inertia it is hard for anyone to hold position, to remain truly objective that is. While some comfort will be derived from the fact of such strong official / governmental backing, the very powerful and obvious emotive content and the dynamiting of the top slopes by NGOs such as Greenpeace and the WWF, will likely *create serious doubts for many* too (subconscious in some cases). And right from the start an exploration of skeptic sources would be discouraged by the Dem/Lib peer group (either explicitly or via the term ‘denier’ and other techniques); likely only a small minority would venture there often enough to gain some skeptic perspective. Most people stepping into this avalanche of orthodoxy, however well-motivated, will end up moving in the same general direction; their grasp of all the main issues will be shaped by official arguments (independently of whether these are essentially ‘right’ or ‘wrong’, or just ‘likely’ to some degree). Those with sufficient interest to stay in the climate domain for an extended period are likely to be sucked into the culture of CAGW itself, which defends its orthodox narratives as all cultures do, and promotes the certainty of catastrophe that can be such a blind to further investigation. At that point they are not Democrats who lean towards belief in seriously dangerous man-caused climate change, they are climate change advocates who vote Democrat because this is the only party large enough and allied enough to advance their agenda. Either way, these questing science-aware types will become familiar with the issues and will also *rise* on Dan’s polarization chart. Their journey represents a cultural steering, in the direction of the avalanche. For many, their doubts and glimpsed uncertainties will tend to remain suppressed.

In contrast, questing science-aware Republicans will tend to be suspicious of official sources from the get-go, allied as these are to opposing politics. They will try and peer between the cracks, try and seek out alternative narratives. They will tend to be apprehensive about the sheer force of the orthodox avalanche, especially as they’re not sure how it all got going in the first place, yet suspecting it’s not primarily a force driven by science. Though inevitably a few will get swept into its currents, most will stay at the margins and try to figure out what’s going on from there, attaching to skeptic sources that resist the flow. Probably more slowly than their Democrat counterparts, they will learn of major issues: the poor skill of models, the error ranges and contradictions in paleo-climate proxies, the importance of natural variation, the lack of unprecedented change, the inherent bias in many official statements, the hollow nature of the fabled 97%, and so on. Many will probably be pleasantly surprised that their political position has led them to the proper questions that science should always ask, and which climate orthodoxy has suppressed. However, none of this means that there aren’t negative memes in skepticism, such as “it’s all a liberal hoax” or whatever, and some will foster this politically motivated stance in parallel to their science quest, a minority to the extreme. Yet it takes more than a few negative memes to make a culture, and climate skepticism is not a coherent and driven social entity, not at this time a culture in its own right. And while some questing science-aware Republicans may end up on the side of science for less than noble reasons, as a whole they will nevertheless become familiar with the issues and will *sink* on Dan’s polarization chart. Their journey represents *a resistance to a cultural takeover*, with the shield of rigorous scientific principles deployed to help in defense; an attempt to resist ultra-expensive policies dictated by CAGW culture, unless or until some benefit can be scientifically demonstrated.

The current state of scientific endeavors regarding what is essentially a wicked problem, are easily wide enough to accommodate both these positions for the science aware. And no minority psychology such as ‘dualism’ is required to understand folks at each pole. They are simply the two poles of interpretation of the currently available data and theory sets. While one pole may indeed be much more culturally biased than the other, for each group *the journey itself* will increase their confidence in their position. Each will arrive at opposing stances on almost every big issue. Meanwhile a major group *in-between* the two poles,

the ‘luke warmers’, is not really visible in this data. This is another clue to the limitations of the survey tools here, which are mainly attempting to measure left-right responses in a domain where a third culture dominates. Indeed the tribal positioning of mainstream politics in the US regarding climate, which does *not* occur in many other countries, helps to disguise the very presence of a climate culture. Yet this culture is key to understanding the survey results, and in fact cuts across politics. Its alliances and defense of orthodoxy (the ‘DNA’ of a culture) do show up on the left-right map, albeit this is not the best way to view the domain. And that defense of orthodoxy is easily visible and frequently commented upon. For instance economist Richard Tol says: “*Politically correct climate change orthodoxy has completely destroyed our ability to think rationally about the environment.*” ([American Interest 10th December 2014](#), hat-tip [Climate Etc](#)).

So, here is my distilled logic in the same manner as I attempted to cover Dan’s above. Regarding the strong polarization in [DK1](#), for the *science unaware* this represents a cultural defense in both cases. For the increasingly *science aware*, most Dem/Libs follow a path that becomes more and more orthodox as the major issues are assimilated, *the culture and knowledge coming as an inseparable package*. Some enter climate culture; some remain allied only via politics, and suppress their doubts about the certainty of catastrophe. Most Rep/Cons, initially suspicious of orthodoxy, instead follow a path that leads to alternate narratives and to genuine scientific questioning, of both orthodoxy and sometimes of alternate skeptic positions too. In the majority, both political camps answer *literally* to Dan’s [DK2](#) questions about what ‘climate scientists believe’, however this form of questioning is relatively successful at avoiding cultural defense. Hence the Dem/Libs who are doubtful and only allied to CAGW culture *when the party identity requires this*, are able to admit that while they also think the climate scientists believe all sorts of scare stories which orthodoxy promotes, *they do not believe these stories themselves*. The smaller Dem/Lib contingent who are much more committed, who are full adherents to climate culture, genuinely *do* believe what the scientists state. But these two differently motivated Dem/Lib groups are not distinguishable via this form of questioning. Meanwhile Rep/Cons answer the [DK2](#) questions with more or less their public stance on climate science, i.e. they think that *the scientists* believe all the scary stories, *but they do not believe these stories themselves*. Even for the science aware, this is completely consistent with their polarized position in [DK1](#) (not constrained by a defense of orthodoxy, their science quest mines beneath the false consensus to reach the genuine uncertainties beneath). There is no need for minority and unsatisfactory psychological theories such as ‘duality’, however a *mainstream* understanding of how cognitive bias mechanisms work, *as applied to the climate Consensus*, must be acknowledged for this interpretation. The table below summarizes Andy’s position and also what I think Dan’s position is.

	Dan	Andy
Response to what ‘climate scientists believe’ per DK2.	Mainly what folks believe themselves, albeit ‘latently’ in many cases.	Mainly what folks think climate scientists believe, i.e. a literal answer to the question.
Conclusion regarding above.	‘A widespread apprehension of danger’.	Largely: a shared mistrust of scary climate science. Lesser: question can’t distinguish motives.
Who most lets their cultural guard down in DK2 data?	Rep / Cons.	Mainly Dem / Libs (the climate cultured minority of these don’t, but per above aren’t distinguishable).
Who is most culturally steered in DK1 data?	Rep / Cons, the <i>science aware</i> Rep / Cons more so.	<i>Science unaware</i> : equal for both political camps. <i>Science aware</i> : Dem / Libs.
Most influence / overlap with CAGW	CAGW does not appear to be considered a culture in its own right.	Dem / Libs.

culture.		
Theories.	‘Dualism’: to explain the puzzle of “what’s happening in their [Rep / Con science aware] heads”.	Major cognitive bias in the Consensus, to the extent that CAGW has become a culture in its own right.

While there is plenty more circumstantial evidence out there to support this alternate interpretation to Dan’s, in an already large post I can only squeeze in a couple of snippets here, for which I’ll use more surveys as we’re in that mode. From 2011 (I can’t find a later version of the same poll, but this is only 3.5 years old): ‘...*a Rasmussen Reports national telephone survey of American Adults shows that 69% say it’s at least somewhat likely that some scientists have falsified research data in order to support their own theories and beliefs, including 40% who say this is Very Likely. Twenty-two percent (22%) don’t think it’s likely some scientists have falsified global warming data, including just six percent (6%) say it’s Not At All Likely. ...Republicans and adults not affiliated with either major political party feel stronger than Democrats that some scientists have falsified data to support their global warming theories, but 51% of Democrats also agree.*’ [Hat-tip WUWT.](#)

Wow. *51% of Democrats also agree.* This is strong support indeed for row 2 in Andy’s column of the table above; *a shared mistrust of scary climate science.* So not just the Republicans. Not even the very many Democrats too who merely think that the science has veered off course. But also *fully half of the Democrats* who think it’s actually likely to be *falsified* (due to the over-ardent belief of scientists). None of this would appear to be at all consistent with ‘a wide apprehension of danger’. Nor would further findings from the [2014 Gallup Environment Poll](#) already mentioned above: those who think that the seriousness of global warming as presented in the news is exaggerated, have *risen* 11 percentage points over the last 15 years (31 to 42), while in the same period those thinking that the news is generally correct have *fallen* 11 points (34 to 23). Those who think the news *underestimates* the problem have also risen, but by a smaller amount (27 to 33). Hence overall, this represents a modest growth in the CAGW convinced for whom no alarm seems to be great enough, i.e. those who *are* apprehensive of danger, yet a much greater *drop* of the other two groups: the centre-ground folks who take the news at face value, and the unconvinced too, who are now the largest group by a fair margin. (The number of don’t-knows has presumably dropped also, else the percentages don’t match). Polarization is occurring here, a clue to add to many others that a culture is likely at work.