

Confidence in Attitudes: Explicit and Implicit Factors

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Thanks to the organizers for inviting me here today. Let me begin by acknowledging the most prominent collaborators on this line of research – Pablo Briñol, Derek Rucker, Jamie Barden, Zak Tormala, and Christian Wheeler. I am going to talk about attitude certainty — including both implicit and explicit factors. Just so that we are all on the same page, let's start with a definition of what attitudes are. Attitudes refer to our general evaluations. We can think that President Bush is good or bad; that the Iraq War is sensible or stupid, and so forth. Scholars care about attitudes because they guide our behavior, at least in part. The behaviors that we're interested in for the purposes of this meeting are things like voting, volunteering, making monetary contributions to candidates, and so forth.

Over the past few decades it has become abundantly clear that not all attitudes are alike – some are more consequential than others. Jon has already noted that within the American National Election Studies there have been some attempts to demonstrate this. This research goes under the label of “attitude strength.” So we know that attitudes of exactly the same valence, +3 on a –3 to +3 scale, can vary in a variety of ways such as their accessibility and whether the emotional foundations of the attitude are consistent with the cognitive bases. These are examples of structural properties of attitudes.

My talk, however, is not about the structural bases of attitudes, but about a meta-cognitive property that has been included in the National Election Studies for some time -- the certainty with which people hold their attitudes toward a candidate, their political party or maybe some social issue. So, two people might have exactly the same evaluation of the Democratic or Republican candidate, but one person could hold the attitude with a greater degree of certainty than the other.

Certainty typically refers to a sense that one's attitude is correct or valid. Attitudes based on morality, for example, tend to have a very high sense of correctness and certainty. So you can think of an attitude structure that might look something like this: the Iraq War is bad, but I can also have some degree of certainty or conviction associated with that evaluation.

There is a correlation between the extremity of your opinion and certainty in its validity, but it is important to note that people can hold both extreme and more moderate attitudes with varying degrees of certainty. To isolate the effects of certainty, in the research that I'm going to report, we either control for attitude extremity statistically, or we look at people who have similar attitudes in terms of their extremity, and see if certainty still makes a difference.

Why do we care about attitude certainty or the sense of correctness or rightness of an attitude? Well, that's because we now know that attitudes that are held with greater certainty are more stable over time, they resist change more when attacked, and perhaps most importantly, they are more likely to guide behavior.

Certainty has been in the news a lot lately. I just noticed that the current issues of *Time* and *Newsweek* have various articles that talk about certainty. You may have seen the *Time* piece by Andrew Sullivan that talks about how one of the most important things that we have to understand about the Middle East is the religious certainty that underlies political opinions. It isn't just the anti-American beliefs per se that some people have, but it's the certainty with which those beliefs are held that are consequential.

The same has been said about policy makers in the United States. For example, Bob Woodward's recent book about President Bush, *State of Denial*, is replete with all sorts of discussions of the certainty with which various government officials hold their views and why when new information comes to light, they are apt to resist because of this certainty. So again, certainty seems to be an important topic these days.

I'm going to distinguish two kinds of certainty, the one that is traditionally studied, and a new kind. First, there is *explicit certainty*, the certainty that we can easily report on a self-report scale. I can say that I'm certain of my opinion. I think it's correct. I think it's right, and I can access this feeling directly. Second, there is what we'll call *implicit certainty* (or doubt). This is defined as some level of certainty or uncertainty about an attitude object that is not recognized as such. For example, a person might consciously feel certain in a particular attitude, but still have some nagging doubt that is less accessible to consciousness. This kind of implicit uncertainty is also important and can be assessed with implicit measures. The distinction between explicit and implicit certainty has parallels to the currently popular distinction between explicit and implicit attitudes.

Furthermore, within explicit certainty we can distinguish two different bases of certainty. One can be called an explicit basis to the certainty. This is, when people are certain, or doubtful, they have a good sense of why – where the certainty comes from. However, people are not always aware of why they are certain or doubtful. Thus, sometimes explicit certainty has an implicit basis. So, overall we can say that sometimes people seem to know exactly where their certainty comes from, and other times they do not. In the latter case, they can be certain or doubtful, but it is not clear what the origin of the certainty is. Or, people might think the certainty comes from one source, but it really stems from something else.

Okay, with those distinctions in mind, let's begin with explicit certainty that appears to have an explicit basis. One of the bases that we have studied – and this is a basis that people often give in open-ended surveys when asked, "What makes you certain in your attitudes?" is that: "I've done a lot of thinking about this." This basis makes sense because we know from much empirical research that thinking about your attitude gives it

stability, makes it resistant to change, and makes it more likely to guide behavior. If people recognize their extent of thinking, this perception might also contribute to a sense of conviction.

So in some recent research led by Jamie Barden, we wanted to examine the extent to which people have any kind of reasonable sense of how much thinking they have done about an attitude issue, and then whether this sense of thinking contributes to perceptions of certainty. In this research we manipulated the actual extent of thinking. For example, we know from prior research that if you increase the personal relevance of an issue, then you can get people to think about it more, and this thinking makes the attitude stronger. But, it is not clear if people are aware of their extent of thinking, and whether this perception contributes to attitude strength. For example, it could be that various structural factors associated with thinking such as making attitudes more accessible are sufficient to account for the strength consequences. So, in one study we included (1) a manipulation of the extent of thinking -- personal relevance -- (2) a measure of the extent of thinking -- number of thoughts generated and amount of time spent on the message -- (3) a measure of perceived thinking such as directly asking participants to report on their extent of thinking, and (4) a strength consequence.

As it turned out, each step in the causal chain was significant. That is, personal relevance affected the actual extent of thinking -- people seemed to be aware of how much thinking they were doing -- and this perceived thought predicted how certain they were in their attitudes. Finally, this certainty was related to how likely people were to engage in attitude-consistent behavior. A model that included all of these steps fit the data nicely. In addition to personal relevance, we have been able to show this causal chain with other variables that impact the extent of thinking such as need for cognition and distraction. So from this kind of research, which I haven't really given you the details of, we can see that people sometimes have a very good sense of their extent of thinking and from this they derive a sense of attitude certainty, which then makes the attitude stronger.

Another question that we wanted to address was: Is that always the case? Are people always accurate in assessing their extent of thinking? Or, can people be fooled into thinking that they've done a lot of thinking when they have not? Most importantly, would the mere perception of thinking in the absence of any differences in real thinking enhance certainty and attitude strength? As social psychologists, we know that perception is often more important than reality -- would this be the case with perceptions of thinking?

So here's what we did in a study. We had some undergraduates at Ohio State University read a persuasive message, and in this case, it contained strong arguments in favor of a new Internet-access policy for the campus. After they read about this, they took a little test about the message, a surprise quiz that we told them was going to give us some indication of how much thinking that they had done about the message. If

you've done a lot of thinking about the message, they were told, then you'll score well, and if you haven't done much thinking about it, then you won't score so well.

So they take this quiz, and of course, the performance on the quiz, is rigged so that half of the participants are randomly assigned to get good feedback indicating that they have done a lot of thinking about the message. The other half receive feedback that they did not do well on the quiz indicating that they did not do much thinking about the message. Then, they complete the standard battery of measures that we use in all of this research — attitudes, thoughts, perception of thinking, attitude certainty and behavioral intentions.

So, it is first important to note that how well they performed on the quiz did not affect their attitudes towards the policy. The policy has really good arguments in favor of it, and everybody has actually done some thinking about it. Thus, they form quite favorable attitudes toward it. But, we were successful in affecting how much thinking they believed they had done about the topic. Those who got the good feedback thought that they had done more thinking than the people who got the poor feedback, as we expected. Furthermore, this perception of thinking translated into differences in attitude certainty in the absence of any difference in actual thinking.

Now, *“Is that certainty consequential, even though it stemmed from false feedback about how much thinking they had done?”* To assess that, we had a number of behavioral questions that we asked them. One of these was, “Would you sign a petition to send to the university president about this new policy?” You can see that although everyone was favorable towards the policy, those who felt certain had a greater propensity to behave in line with their attitudes compared to those who were less certain. Thus, this study shows that certainty based on mere perceptions of thinking is consequential.

So one basis of certainty is how much thinking people believe they have done. The second most popular thing that comes up about certainty in surveys is that people say, “I have a lot of knowledge about this, so I am certain.” The more we think we know about something, the more certain we are. If we don't know anything, then we can't be very certain.

So, again, to look at this, here's just one example. If you vary the actual amount of information that people have about something, then this will affect the amount of information that they have. The more actual information they have, the more certain they will be. A sense of certainty does derive from the actual amount of knowledge that people have, and this is mediated by perceived knowledge, and more perceived knowledge increases attitude-consistent behavior. So, just as we saw that real thinking affects certainty, so too does real knowledge affect certainty.

But again, the more interesting question may be, *“Can mere perceptions of knowledge affect the certainty that you have about some issue in the absence of any real differences in knowledge, and is this certainty consequential?”* One thing that we know from prior literature, in the persuasion domain, at least, is that when people are familiar with both sides of some issue, they feel more knowledgeable and more certain. So there’s a line of research in social psychology about presenting people with one-sided versus two-sided messages, where a one-sided message just presents all of the information in favor of a topic or candidate, whereas the two-sided message presents the information in favor of the issue or candidate, but also presents some negative information or some good things about the other side. This counter information is sometimes refuted. In any case, in the two-sided messages people actually have more information and thus feeling more knowledgeable makes sense.

We wanted to use this idea to see if just as there is a mere thought heuristic, does the mere perception that one has considered both sides lead to more certainty? That is, *“When people just think that they have both sides of an issue, or they think that both sides have been considered in some way, does that make people feel knowledgeable — even when they don’t really have any more knowledge about the topic itself?”* So in an initial study led by Derek Rucker, we asked Ohio State undergraduates read an advertisement for a speakerphone. Rather than giving them a real one-sided or a two-sided message, we gave them a message that was simply framed as one-sided or two-sided and we measured their attitudes and certainty.

Here is the one-sided ad. It’s for the Motorola speakerphone, and it has a certain price. The key information on the screen is that 30 of the reviewers gave a positive review of the product. That’s the one-sided message. The two-sided frame just simply adds, “Nobody gave a negative review,” so it’s a very subtle difference. This little difference in information doesn’t change how favorable people are toward the phone. However, this information did have a significant impact on the certainty with which people held their opinions. Our hypothesis is that the two sided message increased perceived knowledge and this mediated the certainty effect.

However, we didn’t measure perceived knowledge in the study. Furthermore, one concern with this study is that the effect might not be due to the two-sided framing per se, but the fact that the two-sided message makes it clear that there is not any negative information about the product. So, we wanted to make sure that this perception wasn’t responsible for the certainty effect. Rather, we aimed to establish that it is the two sided *framing* that is responsible for enhanced certainty. Thus, we did another study. As in the previous research on perceived thinking and perceived knowledge, we also wanted to see if there were behavioral implications.

In this second study, Ohio State undergraduates were presented with a product analysis. The information concerned a new bicycle that was on the market. A lot of Ohio State students ride bikes to campus, and the

message was framed as one-sided or two-sided using a procedure similar to the one I showed you in the earlier study. But in this study, we are also going to cross that manipulation with whether there are actually any negatives presented or not, just to see if that is a limiting factor on this effect.

In the one-sided frame where there are no negatives presented, all you see are positive features of this bicycle – the pros. It's a really good bicycle. This is the two-sided frame. (*Laughter*) Okay, there is nothing different except that presumably some cons *could have been listed*, but there just aren't any. In this ad, you don't really have any more information, but you might think that you do. In this ad, there really are no negatives, so we would expect to replicate what we had seen previously. Now, here's the product as a one-sided frame, but there's at least one negative — the bike does not come with a water bottle. That's something that people want their bikes to come with, so there's at least one negative feature. It's not really highlighted as a negative, but it's present in the information list. Now, in the two-sided version, this feature is listed under cons. So you've got the one- and two-sided frames, as well as whether or not there's actually a negative piece of information listed.

It turns out that there was no effect whatsoever for that one little negative piece of information, and this was as intended. That one little negative doesn't have an impact on judgment, so we collapsed across this factor. However, framing matters. Although everybody likes the bicycle, those who saw the two-sided frame – whether there was one negative feature or not – felt more knowledgeable about the bicycle and more certain than those who received either of the messages with the one-sided frame. Finally, they report that they would have a greater interest in purchasing the bicycle. Again, it's all from just this sense that both sides have been considered. So, when we perceive that both sides have been considered we almost automatically or instinctively, one might say, feel like we have a greater sense of being informed. We feel more knowledgeable, and therefore more certain. Because we are more certain, we are more willing to act on our attitudes.

Well, this is a meeting about politics and I'm talking mostly about consumer products. But conceptually, the attitude object shouldn't matter. We did do one study with a political attitude object. This study derived from some actual campaign materials that were being circulated in the current (2004) election.

First, look at this flyer for one of the candidates. This was some material that was being circulated to students on campus. We turned these campaign materials into an experiment, because as we looked at the materials, we thought -- This is a perfect example, perhaps, of what we're talking about.

So here is the actual flyer. It features a picture of the candidate. Then there are a series of questions such as, Did you know that the candidate received a degree from a certain university? Did you know that the candidate voted to raise the minimum wage? Did she know that the candidate was the chair of the

appropriations committee? As we were thinking about this, we thought, “No, we didn’t know any of that stuff.” In fact, there is probably a whole bunch of information about the candidate that we just don’t know, so in some sense the posing of these obscure questions might make people think that they do not know very much about the candidate – despite the fact that they actually have more information than before reading the flyer.

So even though actual knowledge is going up, people feel less informed. So we thought, what if instead of a series of questions, the brochure just listed the facts – that the candidate voted to raise the minimum wage, was chair of the appropriations committee, and so forth. In this case, people might feel more well informed. In our study, we compared the “did you know” framing with the “just the facts” format. You can see from the data that although attitudes toward the candidate are the same in each framing, people are less certain of their attitudes in the question format.

It is important to note that these certainty effects only held for participants who were from the same political party as the candidate. This could be because these individuals were more surprised at not knowing about their party’s candidate or perhaps they gave more thought to the implications of not knowing this information. These respondents also felt less informed about the candidate and reported being less likely to vote for the candidate. In sum, just the simple format of the information affected perceived knowledge, certainty, and the reported likelihood of voting for the candidate.

Among members of the other party, the framing made no difference. They were not going to vote for the candidate anyway. This fits with data from many other studies where meta-cognitive inferences are more likely to be made when people care about the issue or are thinking about it carefully for some reason.

Okay, so perceptions of attitude certainty can stem from perceived thinking and perceived knowledge. This is true even if these perceptions have no basis in reality — real knowledge or real thinking. Nevertheless, these perceptions are still very consequential.

In addition to affecting behavior, the certainty with which people hold their attitudes can affect how much thinking they do about an issue. In particular, when people have some doubt, they engage in greater information processing. In another study, led by Pablo Briñol, we wanted to see if transitory certainty – certainty that does not come from any real knowledge or extent of thinking – could be consequential for information processing.

Although we have done a number of studies on this phenomenon using different manipulations, a way of affecting certainty that is very relevant to politics is a sense of power. In general, when you are put in a position of power, you feel more confident and certain than when you are not in a position of power. In one

study we randomly assigned undergraduates to play the role of a boss or an employee in a little role-playing exercise in Part I of the experiment. This is a manipulation that has been used in previous studies of power. And to make the manipulation a little bit stronger, we put the high-powered person in a bigger chair, and we put the low-powered person in a smaller chair. In this context, you can really feel the relative power or lack thereof and presumably the sense of certainty – or doubt -- that comes with it.

After having participants complete this little exercise, the first part of the experiment was over. A new experimenter then comes in to administer the second, presumably unrelated study. In this research they are going to read a message. The study is said to be a consumer psychology study, and they're going to read an advertisement for a cell phone and complete some measures. They will either receive an ad that's quite strong and compelling if they think about it, or a message that's not so strong and compelling – a specious message if they think about it.

If attitudes differ between the strong and weak arguments, it suggests that people are attending to and thinking about the message. If attitudes do not differ, they are presumably not thinking as much about the content presented. So, to see how much thinking they are doing about the message, we assess their attitudes and thoughts after reading it. First, the manipulation of boss or employee role did affect a sense of power. If feeling powerful makes one feel certain in one's current position, then there is less need to think about the message. In fact, the attitude results showed that people who recently played the powerful role were less responsive to the quality of the arguments in the ad than people who had recently played the powerless role.

Okay, with this study I have completed my discussion of explicit certainty effects. We have seen that when people actually have done a lot of thinking or acquired additional knowledge, or feel powerful, they can tell you that they feel certain, and this certainty is tied either to the actual amount or the perceptions of extent of thinking, knowledge, or power. But, we have also seen that people can feel more certain even when they have not really done much thinking or acquired more knowledge. Certainty increases simply when people are led to believe they have done much thinking or have a lot of knowledge. The same would presumably be true for power – just feeling powerful in the absence of any real increases in power would enhance certainty. And, importantly, this certainty is consequential – it affects information processing and attitude-behavior consistency.

Now let's turn to another kind of certainty, which we've called implicit certainty or implicit doubt. This is a kind of certainty or doubt associated with an attitude that's not salient or available on an explicit measure, but presumably might be tapped with more implicit forms of measurement.

Before we get to implicit and explicit certainty, let's just review what we've already been told by Brian and Keith this morning about implicit versus explicit attitudes since there are parallels with implicit and explicit certainty.

In our meta-cognitive framework for understanding attitudes, we assume that attitude objects can be linked to both good and bad associations in memory. However, these associations may or may not be endorsed. For example, a person might say, "I think that African Americans are good. That's what I believe." If a bad thought comes to mind or a bad feeling comes into consciousness the person might say, "No. That's not what I think. I don't know where that feeling came from, but it's certainly not what I think," even though they might recognize that it's there. So in the meta-cognitive model, to evaluative associations we add certainty or validity tags. We assume that people can store these reactions.

So if a person had an attitude like the one in the figure, what would we assess with implicit and explicit measures — especially those implicit measures that tap automatic associations? The explicit measure would come out as good, because even if bad came to mind, the person would be able to consciously invalidate this reaction and say, "No, that's not me. I feel good about the object, and I'm certain of that." But some implicit measures tap into automatic associations that occur prior to accessing validity tags. Such an implicit attitude measure would reveal some combination of good and bad, but because the bad association link is actually stronger than good, the implicit measure might even come out on the bad side.

Notice that this attitude structure produces a state of evaluative conflict at the implicit level. But notice also that this conflict does not occur at the explicit level since people only endorse one side. We have now done a number of studies where we assess or create discrepancies between explicit and implicit attitude measures because people have both good and bad associations, but only one side or the other is endorsed. If you ask explicitly about doubt or ambivalence in this situation, people do not report any evaluative conflict with respect to the attitude object, but they nevertheless act as if they are conflicted or doubtful.

Unendorsed associations can come from many places – such as media depictions or past beliefs. Wherever these associations come from, people don't necessarily recognize the unendorsed associations as their own current views. So this is quite different from explicit ambivalence where people might say, "Yes, there are some good things about chocolate cake and there are some bad things about chocolate cake. So I'm kind of ambivalent about chocolate cake." In cases of implicit conflict, people are denying one evaluation, so they don't report being ambivalent about the attitude object.

In sum, we are arguing that at the implicit level people can have a conflict between good and bad – a conflict that is not recognized. The question then is, *"Is this conflict consequential? Does it matter that there are these discrepancies? Do people act as if there is some doubt or conflict?"* For example, if on the ANES you

asked, "Are you certain about this?" they might say, "I'm certain," but yet there still might be some unmeasured implicit doubt.

As I mentioned earlier, one of the consequences of explicit doubt or uncertainty is that people engage in greater information processing. In one of our first examinations of implicit doubt, we did a simple study where we used implicit and explicit attitude measures of the same construct, calculated a discrepancy score, and then presented participants with a message that had strong or weak arguments to see if people with high implicit-explicit discrepancies would pay more attention to the information than people with low discrepancies. So, in one study some undergraduates at Ohio State completed a race IAT -- Brian told you a little about that earlier today -- and an explicit measure of racial attitudes [from Katz and Hass]. Then we standardized and computed an absolute discrepancy score between these two measures. In the interest of time, we won't go through the IAT since you have already heard about it. On discrepancy index, people could come out as quite anti-Black on the implicit measure relative to other people, but quite favorable compared to other people on the explicit measure. This would produce a high implicit-explicit discrepancy score. The reverse would also lead to a high discrepancy. If people are at similar places in the distribution of the explicit and implicit measures, then discrepancy is low.

Are these discrepancies meaningful? To test whether these discrepancies were consequential, participants then got a race-relevant message. This was a message advocating a new program to hire African American faculty at Ohio State University. We gave them strong arguments like "class sizes could be reduced, because we would have more faculty and so forth," or weak arguments like, "Well, if we did that, the current professors could have more free time." This sounds like a good argument to me, but apparently the undergraduates don't think that's particularly worthwhile. (*Laughter*).

In the figure you can see what happens. We have a continuous scoring of the explicit/implicit discrepancy. You can see that as the i-e discrepancy increases, there is a greater impact on attitudes of whether the information was strong or weak. In this sense, people with discrepancies are acting as if they are uncertain or ambivalent. In collaboration with Pablo Briñol and Christian Wheeler, we've done this with at least five or six different kinds of implicit-explicit discrepancies, all showing the same pattern. It doesn't matter what the direction of the discrepancy is either. So, whether implicit attitudes are more favorable than explicit or vice versa, you get a similar effect.

Importantly, participants having these discrepancies did not report feeling any more conflicted about their specific attitudes. This suggests that we are not dealing with explicit certainty, doubt, or ambivalence like I talked about in the first part of this talk. Rather, people are acting as if they are uncertain. This is why we call it implicit ambivalence or doubt. In this study, people walked into the laboratory with these

discrepancies. In the next study we aimed to create implicit conflict in the lab. So in this study to get a little more control, we wanted to create the implicit conflict and know how it developed.

Consider a person who thinks that President Bush is good. He got elected. Many people thought he was good when he was first elected. Now, however, it has been quite a while since he's been in office, and there are probably a lot of people out there who have an attitude structure that we might characterize more like this. Over time they've developed some ideas that there are some bad things about Bush, and so let's go really more extreme and say, "Here's a person who has completely flipped over to the other side." In the figure is a person who now thinks that there is so much bad that he rejects the prior good thoughts. But, even though the good is rejected, it is still associated with the attitude object from past experience creating the potential for implicit conflict.

That is, at least at the association level, there is conflict. The evaluations that we used to endorse are still there, associated with the attitude object, but we just are rejecting them at the current time. So notice that this is conceptually identical to the situation I showed you before of implicit/explicit discrepancy. Here, at the explicit level the person is going to report that Bush is bad because he is accessing and endorsing the bad but denying the good. The person might say that Bush is bad and be quite certain about it. But at the implicit level, at the level of automatic associations, there is some good that's still associated with Bush. So, an implicit measure is going to pick up some good associations along with the bad. If so, this person has implicit but not explicit uncertainty.

In general, people who change their opinions — especially strongly held ones, even if they change to views just as strongly on the other side — should show some evidence of uncertainty. In the last study I will report today we tried to create such a situation in the lab. In this case the target is not President Bush, but Eddie. This study was in collaboration with Zak Tormala, Pablo Briñol, and Blair Jarvis. In our study we first got people to like or dislike Eddie using an evaluative conditioning procedure, and then either changed their attitudes or not to the other side.

That is, after first creating an attitude, we did one of two things. Some people got information that reinforced their initial attitudes. If people started out positive, we kept them positive, or if they started out negative, we kept them negative. For others, the initial attitudes were reversed. In terms of the valence of the attitude, we want to create groups of people whose attitudes at time 2 were identical, but one group held this attitude all along and another changed to this attitude. We also wanted people to be equally certain at the explicit level of their current attitudes.

So now the key question is, *"Do people act differently even though their attitudes look the same right now? Two people have the same opinions and they have the same explicit certainty in their current opinions. All*

that differs is what they used to think.” To assess this, we told participants that Eddie, it turns out, was a candidate for a teaching position at Ohio State. Since this is a person rather than a consumer product, we gave them his CV, which was either quite impressive or not. Strong Eddie had a Ph.D. from Stanford, and he got a 9.8 out of 10 in his research score,” whatever that means. Weak Eddie graduated with an MA from the Australian School of Education,” if there is such a place, and his research score was only 5.1 out of 10. You can look this up online to see what your own research quality score is. *(Laughter)*

Anyway, look at what happens. The people who either were always positive towards Eddie or always negative, they’re not paying that much attention to the quality of his vita – it isn’t making that much difference in their evaluation of him. They already have strong attitudes on which they can draw. Look at the people who changed their opinions, however. They are doing all of this effortful scrutiny of the vita as if somehow they have some doubts about what they should think, even though they show no doubt on the explicit measure.

So in sum, in one set of studies on implicit conflict, we had people who had existing discrepancies between their implicit and explicit attitudes. They acted as if they had doubts. In a second set of studies, we examined people whose attitudes were changed from one strong position to another strong position. These individuals also acted as if they were ambivalent. Overall, our studies provide some evidence for the existence of implicit certainty and doubt. We think trying to understand the bases of uncertainty, whether explicit as in the first part of this talk, or implicit, as in the second part, could be a potentially interesting thing to do with the National Election Survey.

For example, is it the case that people who used to like Bush on an explicit measure and now don’t like him behave differently from individuals who never liked him? Can we now track these differences with implicit measures, or use the implicit - explicit discrepancy measure as an indicator of certainty and predict various behavioral consequences from that?” I think so. Thank you. *(End of Petty_1 file)*