BOOK REVIEW

Martin Smith: *Between Probability and Certainty: What Justifies Belief*
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In the book *Between Probability and Certainty: What Justifies Belief*, Martin Smith provides his normic theory of justification (NTJ) in contrast to the risk minimization conception (RMC) which is the prevailing view of epistemic justification. In general, it is not necessary to claim that a justified belief implies this belief is true and it seems that people are accustomed to using the probability point of view to determine the status of justification of a belief, which is the higher the probability of a belief being true, the more justification we give to this belief. However, Smith tries to provide another option for us to deal with this "uncertainty situation." In Chapters 1–6, Smith develops his theory and compares it to RMC in various aspects of justification—explanation, normalcy, and the comparative; in the last three chapters, Smith gives some formal and technical results in his theory. In this book review, I present the main argument of the book by means of three examples (the lottery case, the laptop case, and the catered case) provided in this book and one example that I give in the conclusion which points out some possible insufficiencies of Smith's theory.

According to RMC, a belief will not be justified unless the probability of this belief being true is high enough. It seems that RMC fits the general use of probability in our ordinary life—a high probability of occurrence provides a good reason to believe that it will really happen, similar to the situation where, after hearing the weather forecast informing that there is a 90% chance of rain, I take an umbrella with me if I go outside.

But, problems may occur when applying RMC in the following case. Suppose I hold a single ticket in a fair lottery of one million tickets and I know one of

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the tickets will win the lottery. By some simple calculation I know the odds of my ticket's losing are 99.9999%. Suppose that 99% is high enough to be a threshold to determine the justified status of a given belief, the belief "my ticket will lose" is justified. Furthermore, not only for my ticket, but the probability of each of all the other tickets losing is 99.9999%.

Now, if we accept multiple premise closure, we are faced with a paradox. According to multiple premise closure, if one has justification for believing each of all premises, and these premises together deductively entail a conclusion, then one has justification for believing the conclusion (p. 6). By multiple premise closure, we can conclude that the belief "no ticket will win" is justified. According to the setting, we know "one ticket will win the lottery" (so this belief is justified), hence we arrive at an awkward situation that the belief "no ticket will win, and one ticket will win the lottery" is justified. This is called the "lottery paradox." In order to avoid the lottery paradox, there are two options— we can either deny multiple premise closure or the idea that "my ticket will lose" is justified. Smith chooses the latter.

Smith provides an alternative theory—the normic theory of justification (NTJ). According to NTJ, "one has justification for believing P iff P is normically supported by one's evidence" (p. 77), and "a body of evidence E normally supports a proposition P just in case the circumstance in which E is true and P is false requires more explanation than the circumstance in which E and P are both true" (p. 40).

As a result, "my ticket will not win the lottery" is not justified in NTJ as regardless of whether my ticket wins or not, it does not need more explanation. This does not mean that something abnormal will not happen in lottery cases, such as someone cheated in this lottery; rather, it means that when we accept the probability of my ticket's losing is 99.9999%, we also accept that "my ticket will win" may still happen in spite of its low probability. In relation to this view, regardless of whether my ticket wins or not, we do not need extra explanation since the probabilistic evidence has explained this. Of course, we will still feel surprised when something with very low probability happens; we may even think there must be something happening which is unknown to us which has led to this result and we need some explanation about it in addition to the probabilistic evidence. Smith calls this "for all intents and purposes' normically supported."

Let us consider another example from this book that illustrates what a justified belief is like in NTJ. Suppose I have set my laptop to turn on with

a randomly generated background which is set to be one out of one million values red and the remaining 999,999 values blue. One day I go to a library desk and turn on my laptop, and before it turns on, I see my friend, Bruce, who is already working on his laptop, and I go to say hello. Upon arrival at his desk, I see his laptop showing a blue background. In this laptop's case, "Bruce's laptop is displaying a blue background" gets normic support by its evidence but "My laptop is displaying a blue background" does not. If "Bruce's laptop is displaying a blue background" is not true, there must be some explanation such as a strange optical illusion or color blindness which is unknown to me. But if "My laptop is displaying a blue background" is not true, we need no extra explanation despite its extremely low probability. Smith said: "If one's belief turns out to be false, then the error has to be explicable in terms of disobliging environmental conditions, deceit, cognitive or perceptual malfunction, etc. In short, the error must be attributable to mitigating circumstances of some kind and thus excusable, after a fashion" (p. 41).

Smith provides NTJ as a new framework to understand justification by requiring more explanation if the justified belief turns out to be false. Although this theory has merit, such as it is consistent with multiple premise closure and it can solve the lottery paradox, if we accept it, we must accept that some beliefs that are unlikely to happen are justified. The following catered case illustrates this situation.

Suppose I am holding a large dinner party to which I've invited 100 guests (denoted by guest-1, guest-2, …, guest-100), and all guests have replied saying that they will attend. Suppose that I know all the invited guests are honest, trustworthy and well-meaning and I have no reason to suspect that any of them won't attend (p. 72). In this case, for any n in 1–100, "guest-n will attend my party" is justified since if guest-n does not show up, based on the evidence, there must be some explanation such as a family emergency, car accident…; by multiple premise closure, we will have that "all guests will attend my party" is justified. Despite the fact that all the guests are trustworthy and if someone does not show up, there must be some explanation which is attributable to mitigating circumstances of some kind, it is still hard to believe that all 100 guests will attend my party, given the real past party experience.

The party case indicates an important issue: are justified beliefs suitable to be the premises of our practical reasoning? To illustrate clearly, let us modify the party case. Suppose that my dinner party is to be catered for and I have a huge bet with someone about whether every guest will come to my party.

Now if I tell the caterers to prepare for 100 people and someone does not show up, I will lose all my money and even go to jail. As I understand that every guest is honest and trustworthy, should I tell the caterers to prepare for 100 people? Smith thinks that "all 100 guests will attend my party" is justified, but it is irrational, based on its high risk, to act upon this belief.

Smith provides another two theories of justification relative to normic conception: threshold normic theory of justification and the interest relative threshold normic theory. The threshold normic theory of justification shows that "one has justification for believing P iff the degree to which one's evidence normically supports P is greater than a threshold t, which can be variable and/or vague" (p. 99) and "the interest relative threshold normic theory shows that to claim that the value of the threshold t is to be determined in part by one's practical interests" (p. 100). Under these two theories, we can adjust the value of threshold t with the actual situation to avoid running a very high risk; hence, the belief "everyone will attend" is justified but is not high enough to meet our practical interests.

Now, we can distinguish two senses of justification: epistemic sense and practical sense. Normic theory of justification meets the former and threshold normic theory meets the latter. Returning to the party case, in order to avoid a very high risk, we can raise the value of t (by some practical interests) to check whether "guest-n will attend my party" is normically supported and in this extreme case— I will lose all my money and even may go to jail if I tell the caterer to prepare for 100 guests and someone does not show up—maybe "guest-n will attend my party" is not justified for every n. In addition to NTJ, RMC must deal with the same issue: are justified beliefs suitable to be the premises of our practical reasoning? For example, in the lottery case, if I already know the probability of one ticket winning the lottery is extremely low and the belief "the ticket I would buy will lose the lottery" is justified, then is it rational to buy a ticket?

So far, Smith's approach seems to be a promising framework for understanding what justification is; nevertheless, the core of NTJ, that is, the requirement for more explanation in mitigating circumstances and normalcy, is not particularly addressed in this book. Although NTC fits our intuitions about what normal is and has some good formal results, the lack of detailed accounts of normalcy makes it difficult to determine which situation needs more explanation than the others and which situation is more normal than the others. However, what bothers us so much in the catered party case is that it is normal that each

guest will attend the party and it also seems normal that somebody will not show up to such a large private party.

Furthermore, it is difficult to understand the role of statistical evidence in Smith's theory. Suppose now we have E1: there is a 90% chance of rain tomorrow, E2: there is a 10% chance of rain tomorrow, and P: it will rain tomorrow. In light of NTJ, E1 does not normically support P, neither does E2 and therefore P will not be justified; hence P will not get more normic support (or more justification) from E1 than E2. Intuitively, we think that E1 will support P more than E2 does and I believe it is "normal" to think in this way; maybe this kind of support is not about the status of justification? What kind of support is this? The use of probabilistic expressions does not necessarily mean that we presuppose the occurrences are random. It is normal for my ticket to win the lottery in the most normal worlds, since there must be a ticket which wins the lottery, but it may be not normal in the most normal world that despite the fact that I studied hard, it turned out I failed some exam, based on the evidence (experience) showing that if I study hard, the probability of passing an exam is 90%. Smith should provide more analysis on this kind of evidence.