

The Yin–Yang Belief Concatenation and Akrasia

ZHIYAO MA

Abstract: Epistemic akrasia describes a non–ideal situation in which an agent holds a belief like, “P, but my evidence does not support P.” It is controversial whether it is possible or rational to hold such an akratic belief. In this paper, I attempt to explain akratic beliefs in terms of an updated notion of yin and yang in Chinese philosophy. Epistemologists evaluate akratic beliefs as if they are the end of an inquiry or inference. Drawing from the updated notion of yin/yang in which yin is conceived as receptivity and yang is conceived as direct purpose (or impulsion), an akratic belief is shown to be an unstable, intermediate temporal belief state in the middle of the entire process. It is not the end result, rather, it is a transitional episode of an inquiry or inference in progress. Hence, it is the entire process to be evaluated rather than the temporal belief state in the middle of the process. Given this notion of yin/yang, an akratic belief illustrates that an agent is open–minded in the sense that she is receptive to evidence, which motivates her to proceed through further investigation. Ultimately, the so-called akratic beliefs are segments of a diachronic process of belief concatenation.

Keywords: yin, yang, complementary, belief, inference, akrasia

I. Epistemic Akrasia

If one holds a belief that she thinks her evidence does not support, her belief is akratic. Some philosophers are concerned with the possibility of holding such a belief.¹ For instance, in “Moore’s Paradox and Akkratic Belief”, Eugene Chislenko (2016) argues that akratic belief is intuitively possible because it has the identical form of Moore’s paradox. He describes a “belief–akkratic–paradoxical assertion” as follows: I believe P, but I should not believe it. Such an assertion seems to have the similar formulation to Moore’s paradox, and it is problematic when asserted in the first–person present tense. However, Chislenko argues that for an agent to be epistemic akrasia, the agent only needs to have one belief P and the other belief that one should not believe P. The belief–akkratic–paradoxical belief is the third belief that one has after the first two beliefs. An akratic belief does not require the third belief. Hence, it is possible to hold an akratic belief.

Borgoni (2014) argues for the possibility of akratic belief by offering two kinds of cases of epistemic akrasia with different types of evidence: undercutting evidence and rebutting evidence. Undercutting evidence undermines the supporting relationship between the initial evidence and belief. Rebutting evidence is simply against the initial belief. Borgoni says, “Beliefs can respond incorrectly to the evidence or even become insensitive to it.” (2014, p. 5) Therefore, Borgoni holds that epistemic akrasia is at least psychologically possible.

Others are concerned with its rationality. Most philosophers take it to be an irrational belief and even give it a constraint, the “Non–Akrasia Constraint”.² Accordingly, one should not believe that “P, but my evidence does not support P.” Others argue that it could be rational.³ It is thus controversial whether such an akratic belief is rationally possible. As I argue, the notion of yin and yang can help us understand this phenomenon much deeper. In this paper, I will mainly discuss the following two opposite views about akratic belief.

a. The Level-splitting view

The level-splitting view is the typical argument for rational akratic belief. In “Rational Epistemic Akrasia”, Allen Coates (2012) claims that if epistemic rationality requires that one’s belief is supported by sufficient evidence, people can make falsely rational judgments about their beliefs since they are fallible. Hence, akratic beliefs can be rational if they are based on sufficient reasons. He provides the following example to depict the case of rational epistemic akrasia:

Holmes brings Watson to a crime scene, that the evidence indicates that the butler is guilty, and that Watson uses good reasoning to arrive at that conclusion. In short, Watson rationally believes that the butler did it. But when he tells Holmes of his conclusion and how he arrived at it, Holmes’s only response is, “Your conclusion is irrational.” Since Holmes is a master sleuth, Watson is justified in believing that he is correct: Holmes’s testimony on these matters is very authoritative. But authoritative though he is, he is not infallible, and this is one of the rare occasions in which he is wrong. So when Watson accepts Holmes’s assessment, he accepts a falsehood. Watson, then, may reasonably but wrongly judge that his conclusion is irrational. Therefore, if he nevertheless maintains his belief in the butler’s guilt, both it and his epistemic judgment of it are rational. Yet in holding them both, he is akratic. (Coates, 2012, pp. 2-3)

In this case, Watson has good reasons to believe the conclusion that the butler is guilty. He has good reasons to judge that his conclusion is irrational as well. (Although it is in fact misleading evidence, according to Coates.) Thus, Watson makes a rational false judgment. The reasons that Watson’s akratic belief is rational are as follows:

First, in the example, Watson’s belief is not epistemically blameworthy in that it is supported by sufficient evidence. Secondly, it is not Holmes’s assessment that defeats Watson’s belief. Rather, Watson’s own consideration of his initial evidence lets him judge whether his belief is rational or not. Third, it is possible that Watson holds his belief rationally albeit he considers it irrational. So even if it is irrational to act on that belief, it does not entail that the belief must in fact be irrational.

b. Irrational Epistemic Akrasia

In “Epistemic Akrasia”, Sophie Horowitz (2014) points out that the “level-splitting” view denies the Non-Akrasia Constraint. She illustrates that the view of level-splitting faces some problems by the example of sleepy detective:

Sam is a police detective, working to identify a jewel thief. He knows he has good evidence – out of the many subjects, it will strongly support one of them. Late one night, after hours of cracking codes, and scrutinizing photographs and letters, he finally comes to the conclusion that the thief was Lucy. Sam is quite confident that his evidence points to Lucy’s guilt, and he is quite confident that Lucy committed the crime. In fact, he has accommodated his evidence correctly and his belief are justified. He calls his partner, Alex. “I’ve gone through all the evidence”, Sam says, “and it all points to one person! I’ve found the thief!” But Alex is unimpressed. She replies: “I can tell you’ve been up all night working on this. Nine times out of the last ten, your late-night reasoning has been quite sloppy. You’re always quite confident that you’ve found the culprit, but you’re almost always wrong about what the evidence supports. So your evidence probably doesn’t support Lucy in this case.” Though Sam hadn’t attended to his track-record before, he rationally trusts Alex and believes that she is right – that he is usually wrong about what the evidence supports on occasions similar to this one. (2014, p. 719).

Horowitz claims that it is odd for Sam to hold the belief that “Lucy is the thief and that the evidence does not support that Lucy is the thief”, since the latter sentence just defeats his first-order evidence. Thus, it is uncertain how Sam should treat his first-order evidence. Moreover, even if Lucy is the thief, he forms the true belief merely out of luck. Besides, if Sam thinks that he considers the evidence thoroughly, he might think that his initial belief reduces the reliability of the higher-order evidence, hence the higher-order evidence is misleading. It is problematic for him to make the judgment in this way. In addition, if cases like Sleepy Detective happen again and again, Sam could only examine

whether the process is rational by checking the process itself, so Level-Splitting will face the problem of bootstrapping. Accordingly, for Level-Splitting, it is uncertain how exactly first-order and higher-order evidence affect each other.

Horowitz also points out that it is impossible for one to act rationally on the belief that “Lucy is the thief, and his evidence does not support it.” If Sam follows either of these, he will not have justification for his behavior. So, it is irrational to hold akratic beliefs.

In this paper, I am not going to argue for the views mentioned above, instead I will attempt to show that the whole notion of akratic belief assumes a static view of the epistemic situation, but it is more insightful to take the situation as dynamically involving the changing of belief in the light of further evidence. What has been called akratic belief should instead be viewed as a stage in a dynamic yin/yang process of epistemic discovery. The focus on akrasia ignores this process. Hence, we should stop worrying about how to conceptualize or deny akratic belief and focus instead on the dynamic side of what is going on when philosophers defend or deny the idea of akratic belief.

II. The updated yin and yang

Before I explain why the concepts of yin and yang can help with the picture of process rationality, let me introduce some relevant background information about the concepts of yin and yang.

The concepts of yin and yang have developed over centuries. For instance, in the Song Dynasty, *Zhou Dunyi* provides his explanation of *yin* and *yang* in his famous work, *Taijitu Shuo*, which combines the conception of *Taiji* (the “Great Ultimate”) with the concepts of motion and rest. His aim is to offer a Neo-Confucianist cosmology, which was criticized and developed by *Zhang Zai*, *Zhu Xi*, and others.⁴ According to *Zhu Xi*, *Taiji* is a principle and it divides into two *qi*. These two *qi* stimulate each other, which generates *yin* and *yang*, and even affects the combination of *yin* and *yang*.

This is one of the mainstream of metaphysical explanation of *yin* and *yang* in Chinese history. However, Michael Slote points out that it is a “proto-scientific cosmology”, and that it has been “superseded by more quantitative forms of scientific explanation.” (2018, p.45) He offers an updated conception of yin/yang in which *yin* and *yang* are necessarily coexistent complements rather than opposites. He also emphasizes that yin and yang are mutually dependent or involved. He then goes on to demonstrate how to apply the concepts of *yin* and *yang* to western philosophy.

For instance, he argues that compassion can be explained in terms of *yin* and *yang*. “One element in compassion is a kind of receptivity that makes us immediately acquainted with the inner reality of the other, as when we feel their distress...full receptivity we are describing here entails and is inseparable from the fact that one is motivated to help the other person in a particular way, and this means that one embodies or exemplifies a kind of directed active purpose in that situation.”(2018, pp. 8-9)

The receptivity here is the yin side of compassion, and the direct active purpose is the yang side of compassion. The receptivity, as the yin side, is the process of taking in others’ inner reality. The yang side is “the fact that one is motivated to help the other person in a particular way”, which can be taken as a practical manifestation. For example, if one sees that someone is in pain, one takes in that person’s feelings as his or her inner state, then it provides the motive to help the person ease the pain. That is the direct active purpose. (Even if one might not act, one has the desire to act.)

It seems that receptivity, as defined above, is quite similar to what Paul Bloom called “emotional empathy.” As Bloom puts it, “Empathy is the act of coming to experience the world as you think someone else does.” (2017, p. 16) He then makes the distinction between emotional empathy and cognitive empathy. Accordingly, cognitive empathy refers to our ability to understand that someone is in pain without feeling it ourselves. He also differentiates empathy from compassion by referring to Tania Singer and Olga Klimechki’s work in which compassion is defined as “feelings of warmth, concern and care for the other, as well as a strong motivation to improve the other’s well-being. Compassion is feeling for and not feeling with the other.” (2017, p. 126)

My purpose here is not to argue against Bloom, but it is worth mentioning the difference between receptivity and “emotional empathy”. In “A Larger Yin Yang Philosophy”, Slote (forthcoming) emphasizes that being receptive to the other’s distress includes being receptive to the intentional object of the other’s feelings. As he puts it, “the full (empathic) receptivity we are describing here entails and is inseparable from the fact that one is motivated to help the other person in a particular way, and this means that one embodies or exemplifies a kind of directed purpose or impulse in that situation.” (2018, p. 9) However, it is unclear whether the “emotional empathy” defined by Bloom includes the intentional object of the other’s feelings.

III. The *yin* and *yang* of belief

So far, I have introduced the updated interpretation of yin/yang, according to which, yin is conceived as receptivity and yang is conceived as direct purpose (or impulsion). In this section, I attempt to explain belief in terms of yin and yang and explore how this interpretation of yin/yang can help us with epistemology, especially with epistemic akrasia.

To delineate the process of belief concatenation in terms of yin/yang, let me introduce the story of Galileo, which exemplifies the yin/yang construction of inference as well.⁵

In ancient times, people noticed darker patches on the Moon’s surface with their naked eyes and tried to explain this. Later the telescope occurred. It allows people to observe the Moon more closely, including Galileo. Galileo observed the patterns of the light and shadow on the Moon and noticed that the shape of the shadow changed over time. The position of the Sun relative to the Moon, similar to how light and shadows change on Earth in relation to holes in the ground. From this, he inferred that there might be craters on the Moon, similar to those on Earth. However, not all astronomers reached the same conclusion despite observing the same phenomenon.

At that time, people had an ordinary background belief that the color of the light and dark varies over time. Why did other astronomers fail to recognize the similarity? After all, they all started with the same goal, to explain the dark patches on the Moon. Galileo was also looking for a plausible answer for the phenomenon. But he was more receptive and sensitive to the information for he was more open-minded. Hence, he paid more attention to all the relevant things, including how the dark and light change on the Moon, and that the Sun’s relation to the Moon varies, the color of the light and dark varies along with it. When the Sun is on one side of the Moon, some places on the Moon become brighter than others. Let’s call this relevant evidence. Galileo received and considered this information, so he was aware that the phenomenon on the Moon might have something to do with the way the Sun is in relation to the Moon. By accepting this proposition, he then was curious to know how these two variations related to each other so that he could update his belief. This motivated him to pay attention to more relevant information. He was curious about it, and he automatically paid attention to all relevant possibilities. Curiosity is a kind of epistemic feeling or emotion, and one of the epistemic virtues that has yin-yang structure. This is because being curious about something entails that one has been already receptive to some relevant information, which is the yin side. Curiosity itself motivates one to do further investigation and pay attention to more information as well, which is the yang side. Hence, by paying attention to all the potential evidence and possibilities, Galileo became more focused, which inspires his creativity, and lets him see the analogy. That is, on Earth, when there is a declivity, if the Sun is on one side of the declivity, the other side of it will be brighter. This is similar to certain phenomenon on Earth. He then drew the inference that it might be because the Moon has craters similar to declivities on Earth and felt confident about his inference. This creative thought comes from his receptivity toward all the possibilities.

The inference chain in the process demonstrates the yin/yang concatenation. Initially, the observation of the dark and light variations on the Moon sparks curiosity. Receptivity to the phenomenon as the yin part motivates Galileo to figure out why. This is the direct purpose or the yang part of it. Consequently, he became attentive to all the relevant possibilities. Subsequently, Galileo noticed an

additional phenomenon: when the Sun's relationship with the Moon changes, the colors of the light and darkness also vary. Once again, his receptivity to this drove him to seek more information, highlighting the connection between yin receptivity and yang motivation in the inference chain. Galileo then noticed the similar phenomenon on Earth and drew the analogy that had not been made before. This kind of focus not only allows him to conceive all the possibilities but also fosters creativity. The receptivity to this new evidence ultimately enables him to draw the conclusion. As is shown in the story, creativity can be regarded as another epistemic virtue here embodying both epistemic receptivity and decisiveness.

In the entire process, Galileo's acceptance of the evidence is the yin side, which allows him to conceive all the possibilities. His willingness to scrutinize all the evidence is the yang side, which allows him to draw the creative inference. Hence, belief involves receptivity to evidence and being willing to use the belief to make further inference.⁶ The yin-yang concatenation occurs each time he encounters new pieces of evidence.

The capacity for drawing the conclusion and taking it to be the answer to the question embodies another epistemic virtue, decisiveness. He could not draw the conclusion without epistemic decisiveness. All the information that he had would be debris. He would not be able to connect them and make the inference.⁷

The reason that I bring this story up is because it is similar to the cases of epistemic akrasia in that it manifests the belief concatenation in which the new evidence occurs constantly. The difference between them is that in the cases of epistemic akrasia, the agent has no decisive evidence to draw the final conclusion whereas in the story of Galileo, the whole body of evidence allows him to arrive at the conclusion. I will explain how the analysis of Galileo's story sheds light on epistemic akrasia in the next section. However, for now I intend to discuss more about how belief is related to emotion as well as expound upon the advantages of analyzing epistemic virtues in terms yin-yang.

As mentioned above, the process of Galileo's inference involves epistemic feelings or emotions, such as curiosity and the feeling of confidence. It indicates that the belief formation processes or inferential processes are not purely cognitive processes, and the result belief or conclusion is not purely cognitive state. According to Slote's analysis, belief can be construed as an attitude of acceptance or the feeling of certainty. The feeling of certainty, in this definition, is a kind of epistemic emotion.⁸ He also mentions that, in the dictionary, the feeling of confidence⁹ is described as a state of "strong belief". If so, then belief can be taken as a positive epistemic emotion toward a proposition.

Belief involves another epistemic emotion, favoring. In Galileo's investigation, he might come across different possible explanations for the phenomenon, but he draws the final conclusion based on his own inference and being able to rule out misleading information. He believes his conclusion over others which means that he favors his conclusion over others. Hence, believing also involves favoring. On the one hand, if someone else doubts Galileo's conclusion, he might want to defend his belief. When he tries to defend a proposition, he is emotionally invested in it. The belief itself provides the motivation to defend.

On the other hand, suppose he is receptive to the new evidence, and he cannot decide if it is misleading so that it can be ruled out or if it supports his original thoughts, which is similar to the cases of akratic belief. How would he react to the new evidence set? Since he is receptive to the combination of the new evidence and the evidence that he already possesses, it naturally generates the motivation to do further investigation to make sure how he should view the new body of evidence, which takes time. Even if the new evidence seems to defeat his first-order evidence, since he is open-minded, he is still willing to consider the opinion that he disagrees with. Open-mindedness as an epistemic virtue has three special features.

First, being open-minded requires not only receptivity but also receptivity to the view that one disagrees with. Secondly, being receptive to the view that one disagrees with is because one respects other's view, especially the view itself. Since epistemic receptivity is an attitude towards the infor-

mation rather than the person who holds the view. It does not involve any value judgment regarding the person. Hence, this open-mindedness is an epistemic virtue rather than ethical virtue.¹⁰ It eliminates the possibility of missing some relevant information because of an ethical value judgment. Thirdly, epistemic receptivity involved in open-mindedness is also an attitude toward one's own beliefs, which connects it with epistemic decisiveness. Since Galileo is open-minded, he is willing to consider the others' views even if he disagrees with them. However, after scrutinizing, he realized that his own inference is more plausible, he then decisively stuck to his conclusion because he respected his own belief. Further investigation or careful scrutinizing takes time. In the cases of epistemic akrasia, the agent does not have time to do further investigation or scrutinize the whole evidence set, so she cannot be as decisive.

Epistemic decisiveness with receptivity can avoid value judgment as well since it is directed toward the evidence and inference. After examining the relevant information, the agent automatically inclines to make the inference and generates the conclusion. It has nothing to do with the announcement of the conclusion or the social status of the agent.¹¹ Furthermore, since receptivity helps us avoid negligence and allows the agent to be willing to scrutinize all the relevant evidence, the agent with decisiveness is then naturally motivated to make the generalizing inference. Hence, such epistemic decisiveness can avoid the personal risk of arriving at the wrong answer because of the value assessment.

There is more to say about epistemic receptivity. As I mentioned previously, yin can be taken as receptivity. Receptivity itself includes yang. For instance, in your inquiry, you can be aware of it because you are receptive to your own life. The receptivity and awareness of your inquiry allow you to be more sensitive to the information. Automatically, you are willing to receive things, so you start to pay attention to the information and environment around you. The willingness is the yang side of receptivity. You then will be aware of the relevant clue. The relevant clue could be your background memory or new information.

There is one more thing to mention before I discuss how this helps with other philosophical issues. There are various definitions of evidence. For example, according to Russellian views, evidence can be understood as sense data that we can conceive immediately. According to evidentialism, perceptual, introspective, memorial, and intuitional experiences can count as evidence.¹² I am not going to discuss the definition of evidence in detail here. I will accept the broader definition for the current purpose. In an inference chain, the receptivity of evidence is the yin part, which motivates the subject to come to a temporary conclusion, the yang part of it. This progress could be repeated again and again.

IV. Epistemic Akrasia and Belief Concatenation

Now, let's see how to explain epistemic akrasia based on the concept of yin-yang and why it is more plausible than the views mentioned above. First, let me describe in more detail the belief concatenation extracted from the case of Galileo.

An inference starts with curiosity or a desire to know something. It requires people to be receptive to their own desires or curiosities so that they can be aware of and pay attention to or focus on all the relevant information and the environment around them. This is the process of gathering relevant evidence. In this process, with the help of open-mindedness and sensitivity to all the possibilities, people weigh the evidence, or even filter the evidence so that they can rule out misleading evidence. This process can be called the coalescence of evidence, which is the yin side here. Based on the current evidence, people infer a temporary conclusive belief that is properly supported by the evidence. This exemplifies epistemic decisiveness, which is the yang side. It also involves the yin part in the sense that it entails being receptive to the prior evidence and the temporary conclusive belief could be the evidence for further inference. It involves another yang part as "a directed active purpose" for the belief might arouse the curiosity for further questions, causing the process to restart,

or it might provide a practical motivation for further action. In this process, yin and yang are complementaries and they are dependent on each other. One thing to notice is that the yin doesn't cause the yang; these two are metaphysically mutually dependent and co-exist.

In cases of akratic belief, an agent begins by forming a belief *P* based on first-order evidence and the agent is (at least) confident in *P*.¹³ Then someone else gives some additional (or higher-order) evidence. If the additional evidence supports the agent's first-order belief, the agent only needs to examine whether it is reliable. However, in the discussion of akratic belief, such cases are often set aside. The additional evidence is usually called higher-order evidence or second-order evidence in the cases of akratic belief, which is evidence about one's evidence. It has a defeating force if it demonstrates that the first-order belief is the result of a flawed process. This kind of higher-order evidence works as a defeater.

After accepting the new evidence that has a defeating force, the agent might be uncertain about *P*. Now the reasonable task is to examine both first-order and higher-order evidence. This step is what has been almost always left in the stories of epistemic akrasia. It is also in this step that rational delay occurs because it takes time to receive and weigh new evidence and so it takes time to update one's attitude.

In this step, the agent accepts the additional evidence because he or she pays attention to all relevant evidence and tries to conceive all the possibilities. Now the process of coalescence of evidence starts again which takes time. The yin side includes both the acceptance of the new evidence and the process of weighing additional evidence. In the middle of this process, the agent might come to believe that *P* but his or her evidence does not support *P* because he or she might not finish weighing and filtering the evidence. Thus, the agent's belief state might keep changing in the middle of the ongoing process. Hence, the akratic belief is just a description of an episodic belief state in the middle of the process.

When the agent arrives at the conclusion later (maybe with more evidence), the confidence of his or her further belief is yang. Yin and yang work dynamically throughout the process.

Consider the sleepy detective case again. In the first part of the inference, after accepting and weighing the first-order evidence, the detective Sam concludes that Lucy is the thief which is properly based on his first-order evidence. Suppose at this time he is 100% confident about his belief. His certitude (or confidence) of this belief contains the motivation to arrest and interrogate Lucy. This is the stable yin-yang structure of that belief. Before acting, his partner, Alex, tells him that he has been up all night working on this, and his late-night reasoning has often been quite sloppy, which counts as the higher-order evidence. It affects the stable belief state. If Sam is open-minded and receptive to this evidence, he will be willing to start the process of coalescence of the evidence again. That process might last longer than expected. He might need more time to update his attitude.

In the middle of the process, he might come to believe that Lucy is the thief, but his evidence does not support that. The akratic belief that "Lucy is the thief, but my evidence does not support that" is the mere description of Sam's mental state at one point during such a process. Note that this is an unstable, intermediate belief state. Although it is an unstable, intermediate belief state, it still involves the yin-yang structure.

In such a situation, suppose the belief that Lucy is the thief could be one possible conclusion in the future, and the belief that Lucy is innocent could be the other possible conclusion in the future. When evaluating the total evidence, Sam might come to believe that, according to the first-order evidence, Lucy is the thief, but the higher-order evidence indicates that his former evidence does not support that. This is a description of such a mental state in the middle of the coalescence process. The yin side of it is Sam's receptivity to the whole evidence set, and the yang side is the motivation to continue the whole process or even to find more evidence. Now the total evidence includes both his first-order evidence and the higher-order evidence or even more. He needs more time to finish the evaluation of the evidence. In the future, he might reach the final conclusion.

As is shown above, there is an analogy between what happens in the Galileo Moon Case and what happens in the Detective Case. The yin/yang structure of the inference (at least inductive inference) can be extrapolated from the former case to the latter case.

Horowitz raises two questions about the akratic belief. The first one challenges the judgment about the first-order belief. Without the higher-order evidence, Sam believes that Lucy is the thief based on his first-order evidence, and he also believes that his evidence supports that belief properly. But later, with the higher-order evidence, he thinks his evidence does not support the belief. That seems contradictory when Horowitz takes akratic belief as the end result. But it is not. This is because the “evidence to be evaluated” now contains both first-order evidence and higher-order evidence. The target is different. The belief that his evidence does not support the first-order belief implies that the evaluation of the new set of evidence is about to start, rather than the end of the new evaluation.

The second objection raises concerns regarding the assessment of first-order evidence. Horowitz outlines the wrong way to evaluate misleading evidence on the basis of higher-order evidence. “P is true. But all of my evidence relevant to P does not support it. It supports low confidence in a true proposition, P, and therefore high confidence in a false proposition, $\sim P$. So, E is misleading.” (Horowitz, 2014, p. 9) She contends that this is not the right way to conclude that the first-order evidence is misleading.

Her aim is to criticize the level-splitting view. According to the level-splitting view, the judgment about misleading evidence is actually about the second-order evidence rather than the first-order evidence. The second-order evidence cannot be a defeater because the rational status of the first-order belief is determined by the first-order evidence, and the second-order evidence cannot change the rational status of the first-order belief. Although I am sympathetic to the level-splitting view on this point, my goal is not to argue for the level-splitting view. The common point of the two views is that they both take the akratic belief to be the end or the conclusion of the entire mental process. Yet unlike the level-splitting view, my account does not regard the akratic belief as the conclusion.

In the sleepy detective case, when Alex tells Sam that his late-night reasoning has been quite sloppy, Sam is just aware of that evidence. He has not had the chance to evaluate it, so he cannot make the judgment about whether the higher-order evidence is misleading or not. Sam might think that “Lucy is guilty based on my previous evidence. What Alex just said makes it seem as if all my evidence now does not support that Lucy is guilty.” According to the yin-yang structure of inference, the natural inclination is to restart the process or to do some further investigation. He might want to find more evidence related to his initial belief. Meanwhile, he might want to know more about the second-order evidence. The critical point to note is that the process, as a whole, takes time.

Another objection is that the akratic belief provides conflicting behavioral dispositions. As in the example of Holmes and Watson, if Watson rationally believes that the butler did it based on his evidence, his belief will motivate him to accept the bet in which he wins \$5 if the butler is guilty and loses \$10 if the butler is innocent. The yang side of a belief is the motivation for accepting the bet. However, suppose that with the second-order evidence, his belief is that “the butler is guilty, but my evidence does not support it.” The additional evidence (or higher-order evidence) affects the stable yin-yang belief state. At the beginning, Watson is receptive to the evidence, and he favors the belief that the butler is guilty, and he is confident about it. The epistemic motivation could be holding this belief constantly or using it in further inferences. If there is such a bet, the belief would generate the potential practical motivation. When Watson’s mental state changes, the yin side changes as he is receptive to new evidence. The initial yang side changes along with it. Being receptive to the higher-order evidence provides a different motivation. The epistemic motivation still exists. The practical motivation changes. At this point, Watson could be motivated to re-investigate the scene, or to ask Holmes why he says so.

The dynamic process of yin-yang concatenation tends to be toward harmony. In the case of belief, when people try to gain knowledge, they need to evaluate the evidence of the belief prudently. When the first-order belief conflicts with the higher-order belief, the belief state becomes unstable.

The process of considering the higher-order evidence and the whole body of evidence might last longer. Sometimes longer than expected, which causes rational delay.

In the previous cases, Holmes's assessment of Watson's inference and Alex's judgment of Sam serves as evidence of their inferential abilities. Broadly speaking, they are the evidence about one's evidence. One accepts the first-order evidence and then evaluates it, which is the yin side. After the evaluation, one decisively forms a belief that is properly supported by the evidence which can provide motivation. The potential motivation is the yang side. One pays attention to the evidence of the first-order process and accepts it because one wants to conceive all the possibilities. Because of the resonance of yin and yang, the previous stable belief is affected. Then one needs to evaluate the whole body of evidence. The process of coalescence of evidence starts again. This is a dynamic process. The judgment of whether the evidence is misleading or not is the end of the process. The akratic belief is only a cross-section of this ongoing process. So, if the akratic belief is taken as the end of the process, it seems to be irrational because it contains conflicts. But akratic belief should not be taken as the end. That is only the middle of the entire rational belief-forming process.

It could be the case where the higher-order evidence is not about inferential capability. Consider the following example. Mary and John got sick. They display the same symptoms. They visit the same doctor and get the same prescription. After taking the medicine, Mary looks better. But that doesn't work for John. After Mary tells John that it works well for her, John might think that the medicine does not work but my evidence does not support it.¹⁴

In this situation, John's first-order evidence is sufficient because he takes the medicine, but he does not get any better. However, Mary's additional evidence shows that the medicine does work for her. John could believe that the medicine does not work before accepting the new evidence. But now, John accepts the new evidence, so his belief could be "The medicine does not work, but my evidence does not support that." Because he is aware of the new evidence, he tends to re-evaluate the evidence. But he has not started to evaluate the new set of evidence yet. He cannot know whether Mary's evidence is misleading or not. The process of inference is dynamic, so when more yin element comes in, the yang element is increased.

This belief, "The medicine does not work, but my evidence does not support that." also has the yin-yang structure, and it could be hard to judge which evidence is misleading or even whether there is misleading evidence.

One example of crucial evidence could be the evidence about whether the causes of their symptoms are the same. Before John gets more evidence, he cannot continue the evaluation of the evidence, not to mention come to a conclusion. As such, he has to stay in such an unstable state a little longer than expected. That does not mean that this is an irrational mental state. Instead, the belief is a mere part of a still an ongoing process.

V. Conclusion

In conclusion, the *yin/yang* thoughts provide another perspective on philosophical issues. For example, as Slote points out, the notion of compassion has the *yin-yang* structure. In this paper, I analyze the *yin-yang* structure of belief and inference.

Based on the belief concatenation, we could find that one of the weaknesses of level-splitting views is that they separate the first-order evidence and second-order evidence. Chislenko does not consider the effect of evidence in his argument. Horowitz mistakenly takes akratic belief as a stable conclusive belief state.

In general, yin can be conceived as accepting and evaluating the evidence for the belief that P, which can be taken as a process of coalescence. Believing that P can give a motivation, which is the yang side of the process. If belief can be explained by yin and yang, the first-order process and second-order process will affect each other, and the reliability of one process is not assessed by using the process itself, which avoids the bootstrapping problem mentioned by Horowitz.

The akratic belief describes the unstable, intermediate mental state in the middle of the further evaluation process. If beliefs can be explained by the conception of yin and yang, the akratic beliefs can be taken as the descriptions of a cross-section of the belief concatenation. It does not need to be the end of the entire process. This is because, 1) belief involves affective yin receptivity to the evidence and Yang motivation to use it in inference; 2) that shows that it takes time for an agent to receive and evaluate the higher-order evidence in cases of akratic belief; 3) it can cause rational delay, that is, it takes time for an agent to update her attitude. Hence, akratic belief should be viewed as a middle stage in a dynamic yin/yang process of epistemic discovery. The focus on akrasia ignores this process. So, we should focus on the dynamic side of what is going on when philosophers defend or deny the idea of akratic belief.

University of Miami, USA

Acknowledgments

I would like to express my sincere gratitude to my supervisor, Professor Michael Slote, for his unwavering support and guidance throughout the process. His insight, expertise and encouragement were invaluable in helping me to complete the work. I would also like to thank Professor Elijah Chudnoff and Professor Berit Brogaard for their feedback and support during the process. I also want to thank my best friend and colleague, Curtis Miller, for his helpful support.

Notes

¹ For more discussion, see, for example, Levy (2004) and Ribeiro (2011).

² See Feldman (2005) and Horowitz (2014).

³ See Coates (2012), Wedgwood (2012) and Tiozzo (2018).

⁴ According to *Zhou Dunyi*, “Non-polar (*wuji*) and yet Supreme Polarity (*taiji*)! The Supreme Polarity in activity generates *yang*; yet at the limit of activity it is still. In stillness it generates *yin*; yet at the limit of stillness it is also active. Activity and stillness alternate; each is the basis of the other. In distinguishing *yin* and *yang*, the Two Modes are thereby established.... The activity within is *yang*, and the stillness is *yin*.” Adler, Joseph A. “Explanation of the Supreme Polarity Diagram” (Taijitu shuo) by Zhou Dunyi Commentary by Zhu Xi (Zhuzi Taijitu shuo jie). (2009, p. 3)

⁵ Slote mentions this story to discuss the yin/yang picture of inference in his book “A Larger Yin Yang Philosophy”, he kindly let me borrow this example to discuss belief concatenation.

⁶ Moreover, it is “a fact about means-end thinking and action”. If one fully believes something, that belief will provide a motivation. Slote says that, “. . .belief also involves receptivity, sensitivity, to the world and to one’s sensory data, and that is why analytic philosophers often characterize belief as having a mind-to-world direction of fit. So the belief ‘there is no food in one’s house’ has both a receptive and a directedly purposive or motivated active aspect. It registers what one’s senses tell one about one’s house and particular objects in it (like cupboards or bread boxes), but it also engages with any desire for food one has in a way that leads/motivates one to act in a particular practical direction (to leave the house). This, again, is yin and yang...” (Slote, 2017, pp. 4-5)

As the example shows, the yin side of it is one's receptivity to the sense data about things in the house. The yang side, which is also the epistemic motivation to see the situation from a certain aspect, is one's being certain about the belief that there is no food in the house. Now if one is also receptive to one's feeling of being hungry, and believes that one is hungry, the two beliefs will combine to provide the practical motivation (the yang side) to go out and search for food. So, the concept of belief itself has the yin-yang structure.

- ⁷ Philosophers like Popper accuse scientists of rushing unreasonably to conclusions, but Slote argues that the decisiveness of someone like Galileo is highly rational, and the rationality can be explained in yin/yang terms.
- ⁸ Some philosophers claim that the feeling of certainty is a kind of epistemic feeling that bears on beliefs or the validity of inferences. Slote mentions that certitude is a higher-level of epistemic feeling. It is unclear whether epistemic feelings and epistemic emotions are different. Although some philosophers argue that they are different, they are often used interchangeably. See, for example, Meylan (2014).
- ⁹ Some philosophers argue that epistemic emotions or epistemic feelings are metacognitive in that they can represent the cognitive state of an agent. See, for example, Arango-Muñoz (2014) and Arango-Muñoz and Michaelian (2014). See, for example, Carruthers (2017) for the opposing view.
- ¹⁰ Open-mindedness, according to some philosophers, is merely an "auxiliary" ethical virtue. For instance, Sosa claims that the manifestation of intellectual virtues is supposed to both "put you in a position to know" and constitute correct belief which, according to Sosa's definition, counts as knowledge. He makes the distinction between purely epistemic virtue and ethical virtue. Accordingly, open-mindedness is regarded as an ethical virtue. People who are open-minded respect others' views properly because they deserve it. However, it is unclear what count as proper respect on Sosa's view. Stephen L. Darwall defines two kinds of respect (1977).

Recognition respect: There is a kind of respect which can have any of a number of different sorts of things as its object and which consists, most generally, in a disposition to weigh appropriately in one's deliberations some feature of the thing in question and to act accordingly.

Appraisal respect: Its exclusive objects are persons or features which are held to manifest their excellence as persons or as engaged in some specific pursuit. Such respect consists in an attitude of positive appraisal of that person either as a person or as engaged in some particular pursuit. (1977, p. 38)

It is unclear which kind of respect Sosa has in mind, but neither of them meets the requirement for epistemic virtue since both of them can involve value judgment, which cannot help us to avoid negligence.

- ¹¹ Sosa mentions another auxiliary ethical virtue, intellectual courage, for it involves value assessment. He says, "suppose 'intellectual courage' is thought to be a virtue in a certain instance because it helps us properly to assess how much personal risk to take for an answer to a certain question. This would presumably involve estimating the proper value of having that answer and comparing this with the risk to one's personal welfare." (2015, p. 44) The manifestation of intellectual courage occurs during the same process of generating the conclusion. The problem is that it is unclear what count as personal welfare. Suppose that personal welfare means human flourishing in Aristotle's sense. If flourishing is taken as fully realizing human capacities or human nature, it is unclear whether it is the realization of human nature as an individual or as a social animal. So it is unclear whether holding the belief is enough or whether it requires announcing one's belief. If personal welfare is taken as human flourishing in the sense of actualizing human capacities as a rational creature, it is also unclear whether it requires objective rationality or not. Because it is possible that an individual holds a belief that is properly supported by his or her evidence, but he or she has no access to some important information that might affect the belief. However, epistemic decisiveness can avoid the problems of intellectual courage.

- ¹² According to evidentialism, the justification of a belief depends on one's evidence. The concept of evidence is related to the concept of reason. For the discussion of evidentialism, see e.g. Conee and Feldman (2004) and Feldman (2012). Another relevant view is dogmatism. For example, Conne (2013) argues that "the event that the person is inclined to regard as a presenting of p's truth, is usually evidence for that truth... even when it is not evidence, the inclination to take a mental occurrence this way usually has a good track record, and cognizance of that association makes for inductive evidence of p."

- ¹³ I will not assume that belief can be taken as certainty here. Slote points out to me a point Moore missed: when one states p, one represents oneself as knowing that p, not merely believing that p.

- ¹⁴ In this case, the second-order evidence is not about one's first-order evidence. I mention this case because it seems to me that second-order evidence should not only include the evidence about one's first-order evidence which might work as defeaters. There could be different kinds of higher-order evidence.

Works Cited

- Adler, J. A. (2009). "Explanation of the Supreme Polarity Diagram" (Taijitu shuo) by Zhou Dunyi. Commentary by Zhu Xi (Zhuzi Taijitu shuo jie).
- Alston, W. P. (1995). How to think about reliability. *Philosophical Topics*, 23(1), 1-29.
- Arango-Muñoz, S., & Michaelian, K. (2014). Epistemic Feelings and Epistemic Emotions (Focus Section).
- Bloom, Paul. (2017). *Against empathy: The case for rational compassion*. Random House.
- Borgoni, C. (2015). Epistemic akrasia and mental agency. *Review of Philosophy and Psychology*, 6(4), 827-842.
- Carruthers, P. (2017). Are epistemic emotions metacognitive?. *Philosophical Psychology*, 30(1-2), 58-78.
- Chislenko, E. (2016). Moore's paradox and akratic belief. *Philosophy and Phenomenological Research*, 92(3), 669-690.
- Coates, A. (2012). Rational epistemic akrasia. *American Philosophical Quarterly*, 49(2), 113-124.
- da Sousa, R. (2009). Epistemic feelings. *Mind and Matter*, 7(2), 139-161.
- Darwall, S. L. (1977). Two kinds of respect. *Ethics*, 88(1), 36-49.
- Horowitz, S. (2014). Epistemic akrasia. *Noûs*, 48(4), 718-744.
- Kelly, T. (2005). The epistemic significance of disagreement. *Oxford Studies in Epistemology*, 1(167-196).
- Lasonen-Aarnio, M. (2014). Higher-order evidence and the limits of defeat. *Philosophy and Phenomenological Research*, 88(2), 314-345.
- Kaplan, M. (1981). A Bayesian theory of rational acceptance. *The Journal of Philosophy*, 78(6), 305-330.
- Slote, M. (2018). Yin-Yang and the Heart-Mind. *Dao*, 17, 1-11.
- Slote, M. (2018). The Philosophy of Yin and Yang. *Chinese-English bilingual edition, Beijing: Shangwu Yinshuguan*.
- Michael, S. (2021). The Yin/Yang of Pervasive Emotion. *Journal of East China Normal University (Philosophy and Social Sciences)*, 53(2), 1.
- Michael, S. (forthcoming). A Larger Yin Yang Philosophy.
- Sosa, E. (2015). *Judgment and agency*. Oxford University Press, USA.
- Wallbridge, K. (2016). Solving the current generality problem. *Logos & Episteme*, 7(3), 345-350.
- Wang, R. (2012). *Yinyang: The way of heaven and earth in Chinese thought and culture* (No. 11). Cambridge University Press.