How Cognitive Abilities Shape Epistemic Standards: A Defense of Permissivism Against the Arbitrariness Objection

by

Burak Arıcı

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Burak Arıcı

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examining committee have been made.

Committee Members:

Assoc. Prof. Erhan Demircioğlu (Advisor)

Prof. Zeynep Direk

Prof. Chryssi Sidiropoulou

Date: 01.08.2025

To my father

ABSTRACT

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A well-known debate in contemporary epistemology revolves around this question: given a body of evidence E, is there always one epistemically rational doxastic attitude to the proposition P? While Uniqueness is known as the position which gives a positive answer to this question, the one which gives a negative answer is known as Permissivism. Proponents of Uniqueness object that Permissivism leads to an undesirable consequence about rational belief: if Permissivism is true, then it is rational for an agent to have a doxastic attitude arbitrarily—which is called the arbitrariness objection. This thesis defends Permissivism against the arbitrariness objection. In Chapter 1, I start with framing the dispute between Uniqueness and Permissivism. In Chapter 2, I introduce the arbitrariness objection and some leading responses to it, especially Miriam Schoenfield's Standard-Permissivism and Robert Mark Simpson's proposal regarding the interaction between epistemic standards and cognitive abilities. In Chapter 3, I examine the notion of arbitrariness in detail by considering different conceptions of it as well as Jenny Yi-Chen Wu's Impurist Permissivism. In Chapter 4, I develop Simpson's view by providing an account of cognitive abilities and epistemic standards, and then build my defense of Permissivism against the arbitrariness objection upon his view. In Chapter 5, I conclude that even though an agent can rationally accept being in a permissive case, this does not follow that her doxastic attitude is formed arbitrarily, as it is systematically or non-randomly guided and shaped by her epistemic standards and cognitive abilities. As a result, the arbitrariness objection does not hold; and therefore, one can still rationally accept that she is in a permissive case.

Keywords: Permissivism, Uniqueness, Arbitrariness Objection, Epistemic Standards, Cognitive Abilities, Mere Randomness, Epistemically Irrelevant Factors

ÖZETÇE

Bilişsel Yeteneklerin Epistemik Standartları Şekillendirmesi:
Keyfilik İtirazına Karşı İzinvericiliğin Savunusu
Burak Arıcı

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Güncel epistemolojide iyi bilinen bir tartışma şu soru etrafında döner: Bir E kanıtlar bütünü verildiğinde, P önermesine karşı her zaman yalnızca bir epistemik olarak rasyonel doksastik tutum mu vardır? Bu soruya olumlu yanıt veren görüş Teklik (Uniqueness) olarak bilinirken, olumsuz yanıt veren görüş ise İzinvericilik (Permissivism) olarak bilinir. Teklik savunucuları, İzinvericilik'in rasyonel inanç hakkında istenmeyen bir sonuca yol açtığını öne sürer: Eğer İzinvericilik doğruysa, bir failin bir doksastik tutumu keyfi olarak benimsemesi rasyoneldir — bu itiraz keyfilik itirazı (the arbitrariness objection) olarak adlandırılır. Bu tez, İzinvericilik'i keyfilik itirazına karşı savunur. Birinci bölümde, Teklik ve İzinvericilik arasındaki anlaşmazlığı açıklayarak başlıyorum. İkinci bölümde, keyfilik itirazını ve buna verilen bazı başlıca yanıtları, özellikle Miriam Schoenfield'ın Standart-İzinvericilik'ini (Standard-Permissivism) ve Robert Mark Simpson'ın epistemik standartlar ile bilişsel yetenekler arasındaki etkileşime dair tezini tanıtıyorum. Üçüncü bölümde, keyfilik kavramını, onun farklı anlayışları ve ayrıca Jenny Yi-Chen Wu'nun Safçı Olmayan İzinvericilik'i (Impurist Permissivism) üzerinden ayrıntılı olarak inceliyorum. Dördüncü bölümde, Simpson'ın görüşünü geliştirerek bilişsel yetenekler ve epistemik standartlar hakkında bir açıklama sunuyorum ve ardından İzinvericilik'i keyfilik itirazına karşı bu görüş üzerine inşa ederek savunuyorum. Beşinci bölümde, bir failin izinverici bir durumda olduğunu rasyonel olarak kabul edebilse bile, bundan onun doksastik tutumunun keyfi bir şekilde oluştuğu sonucunun çıkmadığını, çünkü bu tutumun epistemik standartları ve bilişsel yetenekleri tarafından sistematik veya rastgele olmayan bir şekilde yönlendirildiğini ve şekillendirildiğini sonucuna varıyorum. Sonuç olarak, keyfilik itirazı geçerli değildir; dolayısıyla, kişi hâlâ kendisinin izinverici bir durumda olduğunu rasyonel olarak kabul edebilir.

Anahtar Kelimeler: İzinvericilik, Tekçilik, Keyfilik İtirazı, Epistemik Standartlar, Bilişsel Yetenekler, Salt Rastgelelik, Epistemik Olarak Alakasız Faktörler

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Chapter 1:

INTRODUCTION

Suppose that you are a member of the jury in a criminal trial. For a long time, you have been assiduously taking into consideration all the data considered as evidence both for and against a suspect's guilt. Finally, the trial day comes, and you are asked to give your verdict. You say that the suspect is guilty, but then you see that some other fellow jurors who are just as well-informed, meticulous, and conscientious as you say otherwise. If all the jurors share exactly the same evidence, then how is it possible for such a disagreement to emerge?[1]

1.1 Framing the Dispute

Specifically, such cases pave the way for a more fundamental investigation around which a prominent debate in contemporary epistemology centered: given a body of evidence E, is there always one epistemically rational doxastic attitude to the proposition P?

1.1.1 Uniqueness

The position which has a positive answer to this question is called *Uniqueness*[2]. Richard Feldman (2007), who coined the term 'Uniqueness' by calling it "The Uniqueness Thesis", defines it as follows:

[1] For a review on the "peer-disagreement" literature, see (Christensen, 2009).
[2] Proponents of Uniqueness include White (2005, 2014), Feldman (2007), Christensen (2007), Matheson (2011), Horowitz (2014), Dogramaci and Horowitz (2016), Greco and Hedden (2016), and Schultheis (2018).

> This is the idea that a body of evidence justifies at most one proposition out of a competing set of propositions (e.g., one theory out of a bunch of exclusive alternatives) and that it justifies at most one attitude toward any particular proposition. (p. 205)

Furthermore, the author of the first article which focuses specifically upon Uniqueness was Roger White (2005) who defines Uniqueness in this way:

> Given one's total evidence, there is a unique rational doxastic attitude that one can take to any proposition. (p. 445)

According to Kopec and Titelbaum (2016), there are some differences between these two conceptions. First, it seems that Feldman discusses indeed two different theses such that (1) one conjunct is related to Es that justify Ps, and (2) the other is concerned with Es that justify definite doxastic attitudes to Ps. White's proposal, however, is "logically equivalent" (p. 190) neither to the first nor the second conjunct, because respectively, we could make a distinction with regards to the senses of rational belief between "propositional" and "doxastic" senses[3]. That is, when, on the one hand, we say, "a body of evidence justifies at most one proposition out of a competing set of propositions", we are here interested in propositional justification—having a good reason or justification for believing a proposition, regardless of whether or not one believes it. On the other hand, when we say, "[a body of evidence] justifies at most one attitude toward any particular proposition", we deal with doxastic justification—forming a belief on the basis of good reasons or evidence. White, however, speaks of *people* taking doxastic attitudes here, not only doxastic attitudes themselves. In this way, White's thesis emphasizes the epistemic obligations of the agent, not only the relationship between evidence and doxastic attitudes.

This brings about another distinction between "Propositional Uniqueness" and "Personal Uniqueness" (p. 190). The former refers to the relation between Es and Ps, whereas the latter holds that E dictates one single doxastic attitude one must accept on the basis of one's reasoning about the issue in question. That is to say, similar to the

[3] (Christensen, 2011, p. 4), cited in (Kopec & Titelbaum, 2016, p. 190).

difference between propositional justification and doxastic justification, Propositional Uniqueness is the idea that regardless of people's doxastic attitudes to a proposition, a certain body of evidence justifies only that proposition. In contrast, Personal Uniqueness is the idea that a body of evidence justifies only one doxastic attitude that an agent must have after considering the evidence.

A second difference between the two formulations of Uniqueness that Kopec and Titelbaum mention is that Feldman expresses his thesis by saying "at most one", while White says, "is a unique" about doxastic attitudes. That is, White's formulation seems "more stringent" (p. 190), as it excludes the chance of rational dilemmas "(i.e., cases where there isn't any rational attitude to hold toward some proposition)" (pp. 190-191). The reason for this is that White claims that for any proposition and any body of evidence, there must always exist exactly one rational doxastic attitude. To put it another way, White's thesis rejects the existence multiple rational doxastic attitudes and asserts that some rational doxastic attitude must always exist. Therefore, it eliminates possible situations in which the evidence might be so ambiguous, underdetermined, or conflicting that no doxastic attitude is justified.

1.1.2 Permissivism

However, things are not always that clear. The position which has a negative answer to the question 'given a body of evidence E, is there always one epistemically rational doxastic attitude to the proposition P?' is called *Permissivism*[4], and Permissivism too has an intuitive strength. As Gideon Rosen (2001) says:

> It should be obvious that reasonable people can disagree, even when confronted with the same body of evidence. When a jury or a court is divided in a difficult case, the mere fact of disagreement does not mean that someone is being unreasonable. (p. 71)

[4] Proponents of Permissivism include Rosen (2001), Titelbaum, (2010), Brueckner and Bundy (2012), Decker (2012), Rosa (2012), Meacham (2014), Kelly (2014), Schoenfield (2014), Simpson (2017), Ye (2021), and Wu (2024).

Besides, as in the case of Uniqueness, there are several conceptions of Permissivism. White (2005) distinguishes between Extreme Permissivism and Moderate Permissivism.[5] He describes Extreme Permissivism as follows:

> There are possible cases in which you rationally believe P, yet it is consistent with your being fully rational and possessing your current evidence that you believe not-P instead. (p. 447)[6]

In other words, it is possible that for some E, it is rational to believe P and also rational to believe not-P. On the other hand, Moderate Permissivism is the thesis that it is possible to believe P (or to believe not-P) and have a neutral doxastic attitude to P. Another formulation of Moderate Permissivism is given with fine-grained doxastic attitudes as well. To simply put, Moderate Permissivism allows for different degrees of belief or credence towards P given the same evidence rather than coarse-grained doxastic attitudes such as belief, disbelief, and suspension of judgment. In his more recent writing, White (2014) states Moderate Permissivism thus:

> There are cases in which there is more than one rationally permissible *degree of confidence* one can have in P, given the same evidence. (p. 312, emphasis in the original)

So, for example, rather than saying that it is rational to believe P or not-P, it may be rational to believe P with a credence of 0.6 and rational to believe P with a credence of 0.7.

The literature on the Permissivism/Uniqueness debate has taken place mainly as a response to and defense of Permissivism and has been centered mostly around White's thesis by responding to his objections mostly against *Extreme Permissivism*. Throughout the thesis, I will defend Permissivism against a well-known objection in the debate directed toward Permissivism, named 'the arbitrariness objection' which I will

[5] For more detailed presentations and discussions as to the varieties of Permissivism, see (Jackson, 2021) and (Pettigrew, 2022).

[6] In his more recent writing, White (2014) calls this type of Permissivism "Strong Permissivism" and gives almost the same definition: "There are cases in which it is rationally permissible to believe P, but it is also rationally permissible to believe not-P instead, given the very same evidence" (p. 312).

start examining in the next chapter. Along the way, I will also present different responses to the objection; and following the next chapter, I will criticize and build upon them to constitute my defense. Then, I will closely examine the notion of arbitrariness by tackling different conceptions of it and argue that Permissivism survives in the face of these different conceptions. After handling possible objections, I will finally conclude that the arbitrariness objection fails to undermine Permissivism.

Chapter 2

THE ARBITRARINESS OBJECTION

In Chapter 1, I have introduced the ‘Uniqueness vs. Permissivism’ debate by describing the two camps. Within the debate, there is one argument for Uniqueness which deserves a great deal of attention and has been indeed developed as an objection to Permissivism: the arbitrariness objection, put forward by White (2005).

Suppose again that you are a juror in the criminal trial, but now you think that given the total evidence, it is rational for you to believe that the suspect is guilty *and* to believe that the suspect is not guilty; call this a *permissive case* (i.e., a case in which given E, it is rational to have a doxastic attitude to P and to have a doxastic attitude to not-P). The point is that in such a permissive case, White holds, there will be no difference between the ways you come to believe that the suspect is guilty or to believe that the suspect is innocent. That is to say, you could believe that the suspect is guilty or to believe that the suspect is innocent through rigorous reasoning and consideration of evidence, or only through coin flipping. For the idea is that given the total evidence, if it is both rational for you to believe the suspect’s guilt or to believe the suspect’s innocence, then it does not matter how you come to believe what you believe, as you will in the end have a rational belief anyway (given E, if S’s doxastic attitude to P and S’s doxastic attitude to not-P are both rational, then how doxastic attitude is formed does not matter). White (2005) says:

> If my permissive assumption is correct, carefully weighing the evidence in an impeccably rational manner will not determine what I end up believing; for by hypothesis, the evidence does not determine a unique rational conclusion. So whatever I do end up believing upon rational deliberation will depend, if not on blind chance, on some arbitrary factor having no bearing on the matter in question. (p. 448)

Thus, arbitrariness in a more general sense might be taken to mean *epistemically irrelevant factors*. Nevertheless, this view will be challenged. Katia Vavova (2018) explains (epistemically) irrelevant factors in this way:

> Irrelevant factors are factors that don't bear on the truth of what we believe. We rightly omit such factors when giving reasons. It's tempting to think that we should believe what we do because of evidence and arguments—not because of where we were born, how we were raised, or what school we happened to attend. (p. 134)

Yet, in permissive cases, arbitrariness, viz., epistemically irrelevant factors such as randomness like flipping a coin as defined here, the place where one lives, one's personality, etc., is a way to have a doxastic attitude in epistemic inquiries. White (2014) objects thus:

> "But this is absurd. Surely it is always wiser to let the evidence guide us in inquiry." (p. 315)

Obviously, White speaks to our intuitions: we rationally reach the truth via the consideration of evidence rather than sheer luck or factors that have no relation to knowledge, as evidence leads us to the truth in a consistent and justified way—this is in fact what constitutes (epistemic) rationality, as White implies. Therefore, White claims that given that Permissivism allows indeed for arational ways of forming belief on the grounds of arbitrariness like coin flipping, permissive cases that claim to offer rational responses to different propositions fail to be rational. As a result, it is not possible for one to rationally acknowledge that she is in a permissive case. For if the rational way of having a doxastic attitude excludes arbitrariness, then one cannot rationally have a doxastic attitude via arbitrariness. However, if one accepts that she is in a permissive case, then she also accepts that it is rational to have a doxastic attitude on an arbitrary basis, and this contradicts the idea that the rational way of having a doxastic attitude excludes arbitrariness; so she realizes that she cannot be in a permissive case which she now thinks lacks rationality.

2.1. Formulating the Objection

Here is a formulation of the argument[7]:

> *Premise 1*: If one rationally accepts that she is in a permissive case, then it is rational for her to have a doxastic attitude arbitrarily.
> *Premise 2*: It is not rational to have a doxastic attitude arbitrarily.
> *Conclusion:* One cannot rationally accept that she is in a permissive case.

Premise 1 reflects White's idea that acknowledging a permissive case bounds one to accept that having one doxastic attitude over another doxastic attitude can occur arbitrarily, as the evidence equally supports multiple doxastic attitudes and gives no reason to hold one over the others. So, if the agent acknowledges that multiple doxastic attitudes are rationally permissible (in other words, she is in a permissive case), then she must acknowledge too that having one doxastic attitude among other doxastic attitudes in arbitrary way, say flipping a coin, is rationally permissible as well.

Premise 2, on the contrary, indicates a common intuition as to rationality: forming beliefs in an arbitrary way is not rational, because rational belief, by definiton, must lead us to truth through being responsive to evidence, not through arbitrary factors. Thus, forming beliefs on the basis of non-evidential factors calls this common intuition into question by making itself indiscernible from mere guessing.

Then the conclusion simply follows by *modus tollens*. If, on the one hand, accepting Permissivism rationally supports forming beliefs arbitrarily, and if forming beliefs arbitrarily is not rational on the other, then it is not possible for us to accept Permissivism on a rational basis.

2.2. The Arbitrariness Objection Challenged

2.2.1 Schoenfield's Standard-Permissivism

[7] This formulation of the argument is adapted from Jenny Yi-Chen Wu's formulation of the arbitrariness objection in "A Defense of Impurist Permissivism" (2024), albeit modified to serve my explanatory purposes.

A major way to argue against the arbitrariness objection so as to defend Permissivism is *Standard-Permissivism*. This thesis holds that since people possess different *epistemic standards*, they can have different doxastic attitudes in response to the same evidence, thereby giving an answer to the arbitrariness objection by denying the charge of arbitrariness on the grounds that people's having different doxastic attitudes does not stem from arbitrariness, but instead from their different epistemic standards. Miriam Schoenfield (2014) describes the notion of epistemic standards as follows:

> There are different ways of thinking of epistemic standards. Some people think of them as rules of the form [‘]Given E, believe p![’] Others think of them as beliefs about the correct way to form other beliefs. If you are a Bayesian, you can think of an agent's standards as her prior and conditional probability functions … [W]e can just think of a set of standards as a function from bodies of evidence to doxastic states which the agent takes to be *truth conducive*. Roughly, this means that the agent has high confidence that forming opinions using her standards will result in her having high confidence in truths and low confidence in falsehood. (p. 199, emphasis in the original)

Given different epistemic standards, it seems that the charge of arbitrariness is not an issue for Standard-Permissivism. In a permissive case, S can hold her doxastic attitude non-arbitrarily, as S's doxastic attitude is picked out on the basis of S's epistemic standards. This proposal directs our attention to underlying standards of evidence evaluation rather than isolated beliefs: given E, while S_1 can rationally have a doxastic attitude to P on epistemic standards$_1$, S_2 can rationally have a doxastic attitude to not-P on epistemic standards$_2$. Thus, the type of Permissivism Schoenfield advocates is standards-relative. That is, rationality is not ‘unique’ to a single type of reasoning, but instead it is indexed to S's epistemic standards; and if S forms her beliefs by following her epistemic standards, then S's beliefs emerge as rational beliefs for her. One might think that Schoenfield's suggestion is successful in finding a solution to the arbitrariness objection in that the agent does not arbitrarily choose her beliefs among other permissible beliefs, but rather she follows the belief that her rational methods or epistemic standards prescribe.

Nonetheless, this response to the arbitrariness objection faces objections as well.

Denying the charge of arbitrariness by virtue of Standard-Permissivism faces the same charge: that our epistemic standards are themselves arbitrary (White, 2005, p. 452; Feldman, 2007, pp. 205-206; Ye, 2021). Schoenfield also addresses this concern:

> What reason does [the agent] have for thinking that she is more likely to end up with a true belief by weighting the evidence *her* way, using *her* standards, rather than in some alternative way, if both ways are [according to the agent] rationally permissible? (Schoenfield, 2014, p. 201, emphasis in the original)

That is to say, even if we solve the arbitrariness objection at the level of beliefs by putting forward the notion of epistemic standards in accordance with which beliefs are formed in a non-arbitrary way, do we not encounter with the arbitrariness objection at the level of epistemic standards this time? In other words, why does the agent choose one set of epistemic standards over other ones? Is having a set of epistemic standards arbitrary in this case? For if the agent acknowledges that there are more than one set of epistemic standards, then why does the agent adopts the specific epistemic standards that she adopts? Along with that, if the agent has her epistemic standards non-arbitrarily, then on what basis does she have her epistemic standards?

2.2.2 Ye's Objection to Standard-Permissivism

In a more recent work, Ru Ye (2021) makes a similar critique and mentions the same point with regards to whether the adoption of a set of epistemic standards is arbitrary in a permissive case by stating that Standard-Permissivism relocates the worry from beliefs to standards, in which case the problem is not solved, but instead reappears at the level of epistemic standards (pp. 656-660). Then, she formulates her criticism by evaluating the two different attempts through which the adoption of epistemic standards is shown to be non-arbitrary.

First, she considers "standard-dependent reasons to favor our own standards" (pp. 660-662), according to which we use our epistemic standards to justify holding these standards. Consider a case in which S believes that epistemic standards$_1$ are more truth-conducive than others like epistemic standards$_2$, epistemic standards$_3$, and so on.

Yet, the problem is that S's belief that epistemic standards$_1$ are more truth conducive than others depends upon epistemic standards$_1$ themselves that S holds. For, S can believe that her epistemic standards$_1$ are more truth-conducive just in case S is already committed to her standards, meaning eventually that the attempt to favor our standards through standard-dependent reasons is circular. Ye expresses this concern in the following way:

> It's still rational for me to hold [epistemic standards$_1$] as my standard when I am in the known standard-permissive case; therefore, my belief ['epistemic standards$_1$ are more truth-conducive'] is still rational when I am in the case; therefore, I have a non-arbitrary reason to favor [epistemic standards$_1$] in the case; therefore, it's still rational for me to hold [epistemic standards$_1$] as my standard when I am in the case. (p. 662)

The reasoning can be broken down that way too:

(1) I know that there are multiple permissible epistemic standards, but it is still rational for me to hold my epistemic standards (that is, epistemic standards$_1$).
(2) Because I am rational to hold my standards, it is also rational for me to believe that these standards lead to truth more than other standards (in other words, more truth-conducive than others).
(3) Since I rationally take epistemic standards$_1$ to be more truth-conducive than others, I am not choosing my epistemic standards randomly.
(4) Thus, given the rationality of my belief and the non-arbitrary justification, it is still rational for me to hold epistemic standards$_1$.

So, according to Ye, this reasoning is viciously circular, as the conclusion is used as a premise. Thus, Ye argues that this attempt is not successful to justify holding our epistemic standards in a non-arbitrary way.

Second, she considers "standard-independent reasons to favor our own standards" (pp. 662-664), according to which we can find a way to justify our own epistemic standards without depending upon these epistemic standards themselves. So, in this situation, we can avoid the aforementioned circularity. However, she points out several difficulties with this approach. First, it is hard to find a property that makes one standard epistemically relevant and independent of that standard. She says:

> [G]iven the central place of truth and rationality in epistemology, it's hard to see how 'only my standard has [a certain property] 'can be a *non-arbitrary* reason to favor one's standard. (p.663, emphasis in the original).

That is to say, some crucial properties such as truth-conduciveness and reliability are intrinsically related to epistemic standards themselves, as such properties indeed render epistemic standards rational. So, if epistemic standards$_1$ are more truth-conducive or reliable than epistemic standards$_2$, this property (i.e., being more truth-conducive or reliable) is directly tied to epistemic standards$_1$. The problem here is that this situation shows that the reasons for holding epistemic standards$_1$ are not independent of the standards. Therefore, we encounter a difficulty about a non-arbitrary justification for choosing one standard over the other.

Another issue about standard-independent reasons to favor our own standards is this: in case S believes that epistemic standards$_1$ are superior to epistemic standards$_2$ on the basis of an important property, say reliability, and that this belief can be held even in the case of possessing epistemic standards$_2$, a problem emerges. That is, if S believes that this important property is possessed only by epistemic standards$_1$ in spite of the fact that epistemic standards$_1$ and epistemic standards$_2$ are both rational, the reason that epistemic standards$_1$ could be superior is in fact unclear. For if epistemic standards$_2$ too are rational just as epistemic standards$_1$, then epistemic standards$_1$ ought not to be regarded as superior; thus, doing so contradicts the rationality of both standards, thereby leading us to question the rationality of epistemic standards$_2$. Ye writes:

> [Epistemic standard$_2$] is self-undermining in some sense: a person holding [epistemic standard$_2$] can believe that a particular competing standard is epistemically better. This casts doubt on whether [epistemic standard$_2$] is really a rational standard. (p. 663)

In other words, suppose that S believes that epistemic standards$_1$ have a particular epistemically desirable property" (p. 663), whereas epistemic standards$_2$ do not have that property, in which case S rationally holds epistemic standards$_2$ because they are both rational standards. However, Ye points out that S can believe that since epistemic standards$_1$ have that property, they are in fact superior to epistemic standards$_2$. If this is the case, then whether epistemic standards$_2$ are really rational standards just as epistemic standards$_1$ becomes questionable.

A third difficulty about standard-independent reasons to favor our own standards is that even if we find a certain property like truth-conduciveness that works within one case, we cannot certainly say that it will apply in all permissive cases. For it cannot be guaranteed that S_1 and S_2 will believe, for example, that epistemic standards$_1$ possess a certain property which makes these standards superior to epistemic standards$_2$. That is to say, when an agent believes that her epistemic standards have a certain property, other agents may not hold the same standards. With regards to this point, Ye says:

> [T]here is no guarantee that any rational person in such a case can believe that it's his own standard, rather than the other standard, that has this epistemically desirable property F. (p. 664)

So, Ye examines two attempts through which to show that espousing epistemic standards is non-arbitrary such as standard-dependent reasons and standard-independent reasons and argues that both sorts of attempts fail in the end.[8]

2.2.3 Schoenfield's Anticipation

Schoenfield, however, tackles these concerns preemptively, even before they were explicitly raised by Ye, as follows:

> [The agent] has no reason *independent of her standards of reasoning* for thinking that her standards are more likely to lead to the truth than some alternative. But note that the defender of UNIQUENESS is in no better position,

[8] After making this critique, she moves to making her positive thesis and argues that arbitrariness is acceptable. For the whole account, see (Ye, 2021).

> for the defender of UNIQUENESS thinks that one set of standards is the uniquely rational set and if we ask the defender of UNIQUENESS to give us a reason to think that *her* standards are the uniquely rational standards she cannot do so in a way that is independent of these standards either. Whether we are permissivists or not, we can never give reasons for why we weigh the evidence in one way rather than another that are independent of everything else. This is just a fact about epistemic life that we have to live with: the methods that we use to evaluate evidence are not the sorts of things we can give independent justification for. (Schoenfield, 2014, p. 202, emphasis in the original)

So according to Schoenfield, we would say: the agent does have a reason to have her own epistemic standards, as her epistemic standards are justified through her own epistemic standards, which are indeed the *only* criteria she has. That is, no agent can give a reason for trusting her own way of evaluating evidence that does not already assume the trustworthiness of her way of evaluating evidence. In short, the agent cannot justify her methods to evaluate evidence without appealing to those same methods. Thus, this entails that demanding standard-independent reasons to favor our own standards does not solve the issue of arbitrariness, because as we have just seen, we are bound to use our own standards from the beginning. Schoenfield, however, points out that this is not a flaw in the agent's thinking, but rather "just a fact about epistemic life." Importantly, she also implies that this is a problem for all, rather than a problem for the Permissivist only. For this problem applies to both Permissivists and Uniqueness theorists. So, since both sides face the same problem, this criticism cannot be directed specifically to Permissivism.

2.2.4 Simpson's Objection to Schoenfield's Anticipation

However, Robert Mark Simpson (2017) is not convinced that Schoenfield's explanation successfully deals with the challenge. He says:

> The core of the problem with appealing to NIJ [or the No Independent Justification constraint], in this context, is that it leaves [the agent] in a position from which it is very hard for her to substantiate her professed view regarding

> [doxastic attitude$_2$], namely, that it is rationally permissible to accept [doxastic attitude$_2$], given E, even though [the agent] herself rejects it. (p. 529)

NIJ or the No Independent Justification constraint is the name that Simpson uses to describe Schoenfield's aforementioned explanation as to our inability to give an independent justification for our own epistemic standards—the fact of epistemic life which Schoenfield states. At this point, Simpson's worry is this: by having epistemic standards$_1$, the agent is in fact committed to thinking that epistemic standards$_2$ are less truth-conducive; because otherwise she would not favor epistemic standards$_1$. This implies that epistemic standards$_2$ have clear deficiencies from the agent's point of view in that it produces a belief that is regarded as less truth-conducive by the agent through epistemic standards$_1$. If so, then why does the agent think that doxastic attitude$_2$ that is possessed by a different agent endorsing epistemic standards$_2$ is rational in the first place? In other words, the agent, for example, has doxastic attitude$_1$ based on her epistemic standards$_1$ instead of doxastic attitude$_2$ based on epistemic standards$_2$, because she thinks that epistemic standards$_2$ are less truth-conducive than epistemic standards$_1$. Then, how can she think of epistemic standards$_2$ as rational? This, most naturally, leads us to think that if epistemic standards$_2$ are as rational as her epistemic standards$_1$, then is favoring epistemic standards$_1$ not arbitrary? In order to avoid the arbitrariness objection, she must find a way to explain the reason that she favors epistemic standards$_1$ without arbitrariness and without regarding epistemic standards$_2$ as impermissible.

2.2.5 Simpson's Proposal: Cognitive Abilities

To resolve this difficulty, Simpson introduces a new concept, namely, *cognitive abilities*, and argues that the rationality or truth-conduciveness of our doxastic attitudes depends upon the relationship between our epistemic standards and cognitive abilities. He defines epistemic standards as "the methods via which we form beliefs based on the evidence, and our cognitive abilities" (p. 531) and also defines cognitive abilities as "the abilities that we put into practice in the application of our epistemic standards" (p. 531), in which case he likens epistemic standards to *software*, whereas cognitive abilities resemble *hardware*. To put it more clearly, cognitive abilities can be defined as the psychological or mental capacities an agent has that influence how well she can apply different epistemic standards, like memory, attention, pattern recognition, and so on. So, just as software and hardware must work in a harmonious way for a system to work properly, he thinks that epistemic standards and cognitive abilities must interact properly with each other in the formation of doxastic attitudes. He puts thus:

> [The agent uses her own] epistemic standards that are *optimally* truth-conducive for her, given (i) her cognitive abilities, and (ii) the felicitous interaction between her standards and her cognitive abilities. (2017, p. 534, my emphasis)

To illustrate, he asks us to consider such a scenario: suppose that there are two detectives, named Mars and Drew. They are investigating a crime, and in this investigation, the main suspects are X and Y. After they meticulously evaluate the same evidence, Mars comes to believe that it is 70% likely that X is the culprit and 30% likely that Y is the culprit. In contrast, Drew believes the exact opposite: it is 30% likely that X is the culprit and 70% likely that Y is the culprit. So, can they believe that both detectives are rational in what they believe? Simpson says yes, as they exert different "optimally truth-conducive" epistemic standards.

That is, when they become aware of each other's conclusions and the ways they use to reach their conclusions, both can acknowledge that the other detective's conclusion or doxastic attitude is rational in that the different epistemic standards they use are both optimally truth-conducive for them in agreement with their different cognitive abilities. For example, they use different methods for the examination of the "probative force of testimonial evidence". Suppose that Mars recognizes insincere testimony very effectively by her sensitivity to subtle indicators of insincere speeches or acts, thereby attributing a different probative force to evidence based on insincere testimony. Conversely, Drew is not quite good at the recognition of insincere testimony, but rather she is very good at holistically evaluating the probative inferences of larger batches of evidence. Thus, while Mars pre-sorts and assesses the evidence one by one through considering the sincerity of the testimonies, Drew does not take into account sincerity like Mars does and assesses the evidence as a set. In other words, evaluating evidence "one by one" means examining each piece of evidence separately and deciding how much evidential weight it should have on its own in the investigation process. This 'one by one evaluation' involves paying attention to the details of each piece of evidence individually and combining all these individual assessments to reach a conclusion. On the contrary, evaluating evidence "as a set" means examining all the evidence together or as a whole and concentrating on the general pattern or coherence that it creates in the end. In other words, contrary to analyzing each part in isolation as in the case of the 'one by one evaluation', this 'as a set evaluation' focuses instead on how well all the pieces of evidence in the investigation fit together and endorse one another as a whole. The former is selective and focuses on details, whereas the latter is holistic and focuses on patterns.

In this case, we can see that the two detectives possess different cognitive abilities: while, as I have just said, one is very good at the recognition of insincere testimony through her sensitivity to subtle things about insincere speeches or acts, the other is not very good at this, but instead she is very good at holistic evaluation. Besides, they apply different epistemic standards in accordance with their cognitive abilities with which they are well equipped: one detective evaluates the evidence one by one, whereas the other assesses the evidence as a set (pp. 531-533).

This example aims to show that both detectives have a non-arbitrary reason to have their own epistemic standards, as those standards are in agreement with their cognitive abilities and therefore provide them with the highest chance of reaching truth. Not only that, they can also grant that the other detective's different epistemic standards are equally rational or truth-conducive for that detective after taking into account the cognitive abilities of the other detective. So, we cannot say that one detective's epistemic standards are deficient, because their epistemic standards are indeed optimally truth-conducive when those epistemic standards work together with their cognitive abilities, suggesting that no epistemic standards are inferior to the other in all cases or for all agents.

Thus, in this way, Simpson not only makes use of Schoenfield's solution of the existence of multiple rational epistemic standards, but also he puts forward a way to argue against the idea that accepting different epistemic standards as rational is not plausible due to seeing different epistemic standards as less truth-conducive. Then, ultimately, by appealing to the notion of cognitive abilities, he argues against the arbitrariness objection specifically through repudiating Premise 1 (viz. if one rationally accepts that she is in a permissive case, then it is rational for her to have a doxastic attitude arbitrarily). For when we rationally accept that we are in a permissive case, it is indeed *not* rational for us to have our doxastic attitude arbitrarily due to the fact that we form our beliefs through our epistemic standards in an optimally truth-conducive way given (i) our cognitive abilities, and (ii) the felicitous interaction between our epistemic standards and our cognitive abilities; and this does not mean arbitrariness.

Chapter 3

THE NOTION OF ARBITRARINESS

In the previous chapter, I examined the arbitrariness objection and some criticisms directed to it in detail. At this point, what exactly is meant by the notion of arbitrariness plays an important role in understanding how Simpson responds to the arbitrariness objection, as I will build my defense on his account. So, in this chapter, I will focus on the notion of arbitrariness and explain two different conceptions of it in relation to Standard-Permissivism and the arbitrariness objection, all of which will be relevant to Simpson's proposal.

3.1. Arbitrariness as Epistemically Irrelevant Factors

As I have mentioned, arbitrary belief formation in a more general sense means forming a belief or having a doxastic attitude on the basis of epistemically irrelevant factors, an example of which is randomness such as flipping a coin. In a permissive case in which given E, S's belief in the suspect's guilt and S's belief in the suspect's innocence are both rational, if S randomly forms the belief that the suspect is guilty by flipping a coin, it is deemed that S's belief formation is arbitrary. However, the concept of epistemically irrelevant factors goes beyond this understanding, in which case even if S does not form a belief by flipping a coin and reach her conclusion by rigorous reasoning with the consideration of evidence, it may still be argued that S's belief formation relies on irrelevant factors.

For example, G. A. Cohen (2001) says that he opted to attend Oxford for his graduate studies instead of Harvard. Then, he noticed that notwithstanding having access to the same arguments, his contemporaries who studied at Oxford generally accepted the analytic/synthetic distinction, whereas those who studied at Harvard usually rejected it. This made him question the reason behind these different beliefs. Cohen became concerned that, in relation to his time at Oxford, his acceptance of the analytic/synthetic distinction was influenced indeed by his education instead of the merit of the arguments for and against the distinction. This realization made him uncomfortable, because he thought that studying at Oxford is in fact" no reason to think that the distinction is sound" (p. 18).

In this case, we can surely assume that both those who accept the analytic/synthetic distinction at Oxford and those who reject the analytic/synthetic distinction at Harvard are rational people who form their beliefs upon evidence rather than ways like coin flipping. From the Standard-Permissivist perspective, given that this is a permissive case, what explains this disagreement between the philosophers would be their different epistemic standards; so, it can be argued that there is no room for arbitrariness. However, the problem is that their epistemic standards were seemingly shaped by the school that they attended, thereby rendering their epistemic standards arbitrary in that the schools that they attended are in fact epistemically irrelevant factors. In other words, it is implied in Cohen's example that even when we assess evidence, our epistemic standards are influenced by things we learn and people with whom we discuss. That is to say, their beliefs concerning the existence of the analytic/synthetic distinction are formed arbitrarily, because they had their epistemic standards on an arbitrary basis in accordance with an epistemically irrelevant factor, viz. their schools. And this further concludes that, since epistemic standards are arbitrary, arguing against Premise 1 does not succeed; and the arbitrariness objection still holds.

3.2. Arbitrariness as Mere Randomness

However, Jenny Yi-Chen Wu (2024) questions whether all epistemically irrelevant factors[9] should be seen as arbitrary just as randomness like coin-flipping is seen as arbitrary. She says:

[9] She uses "non-truth-related factors" and "non-evidential factors" to mean epistemically irrelevant factors.

> [E]ven when we accept that the additional non-evidential factor in permissivism is indeed the decisive factor, just like coin-flipping decides the result in [whether the suspect is guilty], there is actually a lack of explanation on why it has to be of the *same category*, namely, to perform in a random, coin-flipping-like manner. (p.1150, emphasis in the original)

So, according to Wu, we cannot account for arbitrariness under the concept of epistemically irrelevant factors, as there is a lack of explanation as to why they are seen in the same category. She seems to suggest that we should not regard all epistemically irrelevant factors as arbitrary in a random, coin-flipping-like manner, but instead we should see arbitrariness only as *randomness* like coin-flipping. As she writes:

> [T]he most charitable way of interpreting the notion of *arbitrariness* in [the arbitrariness objection] is in terms of a coin-flipping-like random mechanism, because that preserves our intuition that motivated our initial acceptance of the [objection] as well as prevents the [objection] from begging the question against permissivism. (p. 1150 emphasis in the original)

She says that we should regard arbitrariness only as coin-flipping-like randomness, because in this way, (1) we can preserve our intuition about the notion of randomness that drives us to accept the objection in the beginning, and (2) this interpretation avoids assuming from the start that all epistemically irrelevant factors are irrational, eventually making the objection question-begging and uncharitable toward Permissivism. With regards to the second point, she says:

> [I]t would almost be a direct denial of permissivism being acknowledgeable. In a way, this is just like packaging whatever extra-evidential factors that are deemed admissible in rational belief-forming by permissive views, labeling them as *arbitrary*, and calling it irrational to knowingly form attitudes based on them. (p. 1150, emphasis in the original)

Then, she aims to show that some epistemically irrelevant factors can play a role in rational belief forming process, thereby emphasizing why epistemically irrelevant factors should not be regarded as arbitrary.

3.2.1 Wu's Impurist Permissivism

To do so, she introduces *Impurist Permissivism*. She explains what she means by *Impurism* as follows:

> *Impurism about rational belief*: There are two subjects S and S′, S and S′ are alike in their truth-relevant profiles with respect to *p*, but S and S′ are not alike in whether they are rational in believing *p*. (p. 1143, emphasis in the original)

Here, she means that when both subjects have the same available evidence and the same epistemic evaluation of that evidence, the subjects may differ in whether to believe in p is rational. To put it another way, their belief formation could be influenced by epistemically irrelevant or non-truth-relevant factors. Thus, Impurism challenges the *Purist* idea that rational beliefs are formed only on the basis of epistemically relevant or truth-relevant factors like evidence or logical reasoning:

> *Purism about rational belief*: For any subjects S and S′, if S and S′ are just alike in their truth-relevant profiles with respect to *p*, then S and S′ are just alike in whether they are rational in believing *p*. (p. 1143, emphasis in the original)

Furthermore, according to Wu, epistemically irrelevant or non-truth-relevant factors include personal stakes, interests, or practical concerns. Wu puts:

> [A]ccording to impurist epistemologies, a cognitive subject's practical environment or pragmatic considerations can make a difference in regard to her rationality or knowledge status *even if all truth-directed factors are held constant*. (p. 1143, emphasis in the original)

When it comes to *Impurist Permissivism*, the idea is that epistemically irrelevant or non-truth-relevant factors can partake in the determination of whether a doxastic attitude is rational, even in such a case where both subjects share the same evidence and reasoning. That is to say, Wu argues that there can be permissive cases in which there are multiple rational doxastic attitudes whose formation include personal stakes, interests, or practical concerns.

To show how those factors play a role in rational belief formation, she gives some examples. An example she gives is related to the notion of pragmatic encroachment. In order to explain this notion, she uses Jeremy Fantl and Matthew McGrath's (2002) account:

> *Fantl and McGrath's Pragmatic Encroachment (PE) thesis*: S is justified in believing that *p* only if S is rational to act as if *p*. (Wu, 2024, p. 1151, emphasis in the original)

Then she explains thus:

> To explain, the amount of justification needed for the belief that *p* to be justified varies depending on how significant the action related to *p* is. The more that is at stake regarding this action, the more evidence one needs in order to be justified or rational in believing *p*. (p. 1151)

Clearly, the point made is that the justification of believing in a proposition is tied to the rationality of acting as if that proposition is true, and the important point here is that personal stakes or the consequences of acting on a belief are crucial when determining the amount of justification to form that belief. If the stakes are high (e.g., when thinking about investing a large sum of money), then we can say that the threshold for justification goes up, and this necessitates more evidence for us to form the belief. If, in contrast, the stakes are low (e.g., when thinking about investing merely one dollar), we can say that less evidence may be needed to form a belief.

Similar to Wu's own example (pp. 1152-1153), suppose that S_1 and S_2 are considering whether Sam is guilty in a criminal trial. S_1 is the judge who will make the final decision which may have undesirable consequences for Sam. S_2, on the other hand, is there to watch the trial just out of curiosity as an observer. Suppose further that both S_1 and S_2 have access to the exact same evidence. However, despite having the same epistemically relevant or truth-related factors, at this point, we can realize that S_1 has a higher threshold for justification to rationally believe that Sam is guilty, because obviously, S_1's stakes are much higher than that of S_2 in that S_1 has a higher ethical and legal responsibility and impact on the society as a judge with his decisions. Thus, it is possible for S_1 to rationally believe that Sam is not guilty, and it is also possible for S_2 to rationally believe that Sam is guilty, in which case their personal and pragmatic stakes influence their beliefs. So, in the end, this example illustrates how pragmatic encroachment through the influence of personal stakes makes room for different rational responses given the same evidence or epistemically relevant factors.

Within the context of Impurist Permissivism, Wu asserts that such a pragmatic encroachment does not mean arbitrariness. Quite the contrary, this indeed shows the importance of epistemically irrelevant factors like personal stakes, interests, or practical concerns in rational belief formation. Concerning the arbitrariness objection, what is significant here is that such epistemically irrelevant or non-truth-relevant factors do *not* influence rational belief formation in a *random* or *arbitrary* way[10]. For their influence is in fact systematic and context-dependent in accordance with, again, personal stakes, interests, or practical concerns; and eventually this situation paves the way for the existence of multiple rational doxastic attitudes in permissive cases. So, to wrap up Wu's point, she argues that we should see arbitrariness as randomness such as coin-flipping, not epistemically irrelevant factors as such, as epistemically irrelevant factors like personal stakes, interests, or practical concerns influence rational belief formation in a systematic and non-random way.

Wu seems to suggest that personal stakes, interests, and practical concerns are epistemically irrelevant, but they *constrain* epistemic standards. To see how it works, consider again the example that we have just given to explain Wu's viewpoint in which S_1 being the judge in the court has a higher threshold for justification due to having a higher ethical and legal responsibility and impact on the society, whereas S_2 being merely an observer has a lower threshold. It is true that one's being a judge or having a higher ethical and legal responsibility is not epistemically related to the justification for

[10] Recall that Wu suggests thinking of arbitrariness as randomness like coin-flipping.

Sam's guilt or innocence in the sense that this cannot be used as evidence for Sam's guilt or innocence, which is of course why these are called epistemically irrelevant factors. However, we can realize that such epistemically irrelevant factors, at least indirectly, shape and put some constraints on epistemic standards that S_1 and S_2 employ when they evaluate the evidence that they have. In the case of S_1, being a judge means having stricter epistemic standards when forming a belief in the court because of the existence of the potential consequences of a mistaken judgment and responsibilities that come with it. So, S_1's epistemic standards are constrained by his practical concerns in such a way that he must form his belief with a meticulous manner in the court. In contrast, S_2, as being merely a curious observer, can have looser standards due to the lack of the potential consequences of a mistaken judgment and responsibilities that come with it, but if he desires to have a somewhat grounded opinion, his epistemic standards are constrained such that he must consider evidence with some care even if it is not as meticulous as S_1. So, it is easy to see that these different personal stakes or pragmatic concerns themselves cannot be considered as evidence for Sam's guilt or innocence, but as we have just seen, they constrain the subjects' epistemic standards by which the subjects have their doxastic attitudes systematically and non-randomly; thus non-arbitrarily.

Chapter 4

HOW COGNITIVE ABILITIES INTERACT WITH EPISTEMIC STANDARDS

We have examined the two conceptions of the notion of arbitrariness and seen how they are related to the arbitrariness objection in the previous chapter. After exploring Wu's Impurist Permissivism, we can now see a similarity between Wu's account and Simpson's account in that while, as we have clarified, Wu argues that personal stakes, interests, and practical concerns constrain epistemic standards, Simpson, as we can remember, puts forward that "[the agent uses her own] epistemic standards that are optimally truth-conducive for her, given (i) her cognitive abilities, and (ii) the felicitous interaction between her standards and her cognitive abilities" (2017, p. 534). That is, both talk about a relationship between epistemic standards and a notion, namely, personal stakes, interests, or practical concerns in Wu's case, and cognitive abilities in Simpson's case; and in neither case, belief formation is arbitrary as epistemic standards appear to be systematic and non-random. However, although Simpson, as I have mentioned, talks about the interaction between epistemic standards and cognitive abilities in rational belief formation, he does not give an explanatory account of this interaction. Nevertheless, he first defines epistemic standards by saying that they are "the methods via which we form beliefs based on the evidence, and our cognitive abilities" (p. 531) and also defines cognitive abilities by saying that they are "the abilities that we put into practice in the application of our epistemic standards" (p. 531), in which case he likens epistemic standards to *software*, whereas cognitive abilities resemble *hardware*. Then, he stresses that for the optimally truth-conducive use of epistemic standards to occur, the agent's epistemic standards must be in a felicitous interaction with her cognitive abilities, but Simpson, does not explain this interaction clearly. That is to say, even though Simpson illustrates the interaction between epistemic standards and cognitive abilities via examples, as we have seen in the case of the detectives Mars and Drew, he does not explain in detail how these two influence each other in a principled way: he shows *that* such interaction occurs and matters for the formation of rational belief, but he does not provide an explanation as to *how* cognitive abilities influence the way epistemic standards are applied, or vice versa. Here, I will argue that this interaction occurs in a similar way in which the relationship between personal stakes, interests, and practical concerns and epistemic standards takes place within Wu's framework. In other words, I will argue that just as personal stakes, interests, and practical concerns constrain epistemic standards, cognitive abilities too constrain epistemic standards. I will also expand and shed some light on Simpson's thesis by considering some possible objections to it as well.

4.1. The Relationship Between Cognitive Abilities and Epistemic Standards

4.1.1 Example from Sensation

First, let me clearly put the relationship between cognitive abilities and epistemic standards. Consider this simple belief: "There is a table in front of me". Obviously, the cognitive abilities that I put into practice, like visual perception, attention, categorization, etc., on the one hand, allow me to form this belief. On the other hand, my epistemic standards, like perceptual immediacy ("I tend to trust what I clearly see"), coherence with background beliefs ("What I perceive aligns with what I already believe to be true"), stability of perception ("Objects remain visually stable across glances"), etc., lead me to this belief. Clearly, these epistemic standards are not the same as the cognitive abilities I have mentioned. Here, while the cognitive abilities provide the required data for belief formation, the epistemic standards guide or determine how we evaluate that data to understand whether beliefs resting on that data count as rational beliefs. To put it in a way that Schoenfield expresses, if we think of epistemic standards as functions from evidence to doxastic attitudes taken to be truth-conducive by the agent, we can also say that the epistemic standard here is: "If it looks like a table and nothing suggests otherwise, then believe that it is a table." So, when this interaction happens, my cognitive abilities constrain my epistemic standards in that *my epistemic standards must match what I am capable of*. If, for example, I see a chair in front of me instead of a table, my epistemic standards do not lead me to believe that there is a table in front of me, because simply, my cognitive abilities allow me to perceive and recognize that what I see is a chair; therefore so as to form an optimally truth-conducive belief, my epistemic standards match my cognitive abilities or what I am capable of, namely, perceiving a chair instead of a table, thereby showing a felicitous interaction between my cognitive abilities and epistemic standards. Furthermore, if my cognitive abilities were different such that if I was blind and had never seen anything in my life, my epistemic standards for forming beliefs about tables would be constrained differently, in which case reliance on touch rather than vision would be much more important. These examples show that the felicitous interaction between epistemic standards and cognitive abilities to form optimally truth-conducive beliefs happens in such a way that epistemic standards are shaped within the constraints set by cognition, rather than arbitrarily chosen.

4.1.2 Example from Mathematics

Surely, cognitive abilities are much more complicated than that, and their formation includes various factors like biology, upbringing, environment, education, so and so forth, and hence we can talk about more sophisticated cases. Suppose that S_1 and S_2 are two agents, and they consider whether the proof of a complex mathematical theorem is true. Suppose, further, that S_1 is a famous professor of mathematics, whereas S_2 is an ordinary citizen with some knowledge of high school mathematics. The question is: what can we say about the ways they consider the truth of the proof of the theorem? It can well be said that while S_1 can use highly sophisticated mathematical equations and theories, S_2 can use simple mathematics and heuristics, or rely on an expert. For their cognitive abilities differ from each other along with their differing background knowledge and experiences, and this paves the way for the employment of different epistemic standards—call S_1's standards 'epistemic standards$_1$'; call S_2's standards 'epistemic standards$_2$'. In this case, it can be seen that while S_1 is able to employ epistemic standards$_2$, S_2 cannot employ epistemic standards$_1$ unless he develops himself and learns certain knowledge and set of skills required to employ epistemic standards$_1$ as S_1 has done, because obviously, the employment of epistemic standards$_1$ are more complicated and demanding than that of epistemic standards$_2$. This illustrates how cognitive abilities constrain epistemic standards: if one lacks cognitive abilities that are required for some epistemic standards, then she cannot adopt those standards. So, since S_2 lacks necessary cognitive abilities, such as advanced symbolic reasoning, abstract pattern recognition, and the capacity to follow multi-step formal arguments across several theoretical frameworks (which are generally cultivated by extensive training and education in mathematics and persistent engagement with complex proofs, axiomatic systems, and mathematical intuition), for epistemic standards$_1$, he cannot adopt epistemic standards$_1$. However, that S_1 can use epistemic standards$_2$ does not mean that S_1 uses epistemic standards$_2$ optimally truth-conducive when he uses them. Recall that Simpson stresses that the optimally truth-conducive use of epistemic standards requires the *felicitous* interaction between the agent's standards and her cognitive abilities. In this situation, we can suggest that this interaction is felicitous when the agent uses the epistemic standards through which she can use her cognitive standards as fully and effectively as possible. In our example, S_1 uses epistemic standards$_1$ in the optimally truth-conducive way, because he can use his cognitive abilities more fully and effectively by employing epistemic standards$_1$. In other words, the famous professor of mathematics can surely use simple mathematics and heuristics to find out whether the proof of the theorem is true, but if he uses the sophisticated equations and theories he knows, then the interaction between epistemic standards he uses and his cognitive abilities becomes felicitous, in which case his epistemic standards are used in the optimally truth-conducive way.

4.1.3 Example from Science

Not only that, we can go one step further and come to see how this framework works in permissive cases. Consider a case in which two scientists, Scientist A and Scientist B, disagree on the extraterrestrial life.[11] Suppose that Scientist A, on the basis of the evidence she has, argues that extraterrestrial life is very likely; in contrast, Scientist B, on the basis of the same evidence Scientist A has, argues that extraterrestrial life is very unlikely. That is, they share exactly the same evidence and knowledge about matters related to physics, biology, astronomy, etc., but they have the exact opposite

[11] Scientific matters are of course much more complicated than that, but suppose, for sake of the argument, that this is a permissive case.

conclusions about the existence of extraterrestrial life. To reach her conclusion, Scientist A pays a special attention to the vast number of potential exoplanets in habitable zones and the grandness of the universe and concludes that there must be life outside of the earth. However, Scientist B instead focuses on the improbability of abiogenesis and how difficult it is for living organisms to survive and evolve in this unfriendly universe and concludes that extraterrestrial life is very unlikely. Here, we can realize that behind their different doxastic attitudes, their empirical data are the same, but they employ different epistemic standards: Scientist A has an epistemic standard that gives greater importance to probabilistic reasoning from large-scale data, and this leads Scientist A to make a more optimistic evaluation. However, Scientist B espouses a more conservative epistemic standard and gives greater importance to the rareness and frailty of life as we know it and the absence of direct empirical evidence for extraterrestrial organisms.

When it comes to their cognitive abilities, it can be said that they differ with respect to how they process and prioritize different kinds of information, especially under uncertain cases like this. For instance, Scientist A may have cognitive abilities that favor pattern recognition and inductive generalization across big datasets; thus, she can extrapolate from large-scale probabilities that take place at the cosmological level. So, such cognitive abilities endorse an epistemic standard that advocates inference to the best explanation and openness to plausible predictions, albeit quite speculative. On the contrary, Scientist B might have cognitive abilities that stress caution, falsifiability, resistance to overgeneralization and empirical conservatism, as a result of which she adopts epistemic standards that necessitate more conclusive evidence before forming a belief. As in our previous example, Scientist B may perhaps employ Scientist A's epistemic standards to reach Scientist A's conclusion that the existence of extraterrestrial life is very likely, but since it is Scientist B's cognitive abilities that Scientist B herself can use the most effectively, it is optimally truth-conducive for Scientist B to use epistemic standards that is most compatible with her cognitive abilities in a way that she uses her cognitive abilities as fully and effectively as possible through those standards. However, suppose that Scientist B, instead of her own epistemic standards, chooses Scientist A's epistemic standards. When she does that, she may struggle to integrate and evaluate the evidence in a coherent way as Scientist A does, because her unacquaintance with or refusal to accept speculative inference may cause confusion or misinterpretation, or reduce her ability to assess the evidence comprehensively, thereby showing again how cognitive abilities constrain epistemic standards. We can thus say that even if Scientist B attempts to follow Scientist A's epistemic standards, she might not have a belief that she can reliably endorse for the reason that Scientist A's epistemic standards do not cooperate with her own cognitive abilities. Therefore, if Scientist A uses her own epistemic standards and Scientist B uses her own epistemic standards, then the interactions between both Scientists' own cognitive abilities and own epistemic standards become felicitous, and in the end, both Scientist A and Scientist B form optimally truth-conducive beliefs.

4.1.4 The Detective Example

Lastly, this framework of course works for Simpson's own example as well. As he has already shown, the two detectives Mars and Drew, as we can remember, use their own cognitive abilities in an investigation to find the suspect: Mars recognizes insincere testimony very well as she is sensitive to subtle indicators of insincere speeches or acts, whereas Drew is not really good at recognizing insincere testimony, but instead she is good at holistic evaluation of the probative inferences of larger bodies of evidence. Then, in alignment with their unique cognitive abilities, they follow different epistemic standards: while Mars evaluates the evidence one by one, Drew assesses the evidence as a set. In the end, Mars believes that it is 70% likely that X is the culprit and 30% likely that Y is the culprit; conversely, Drew believes that it is 30% likely that X is the culprit and 70% likely that Y is the culprit. Despite their conflicting results, we have seen that they use their epistemic standards in the optimally truth-conducive way, as their cognitive abilities and epistemic standards interact with each other felicitously. Besides, we have also examined how this felicitous interaction takes place by explaining how cognitive abilities constrain epistemic standards, and this constraint relation can also be seen in Simpson's example. As in the case of Scientist A and Scientist B, if, for example, Drew tried to employ Mars' epistemic standards, then it would not be very likely for her to make reliable judgments, because Mars' epistemic standards require adequate sensitivity to subtle behavioral cues, and Drew's cognitive abilities are not optimally compatible with the practice of such a skill. Her trials to examine such individual testimonies with the same meticulousness and accuracy as Mars might cause her to overlook some crucial points and patterns in the evidence. As a result, this would reduce her general reliability with regards to her belief formation. In the same vein, if Mars tried to apply Drew's epistemic standards and make a holistic evaluation of the evidence, she might similarly have difficulty to evaluate the data effectively, as Mars' cognitive abilities are not optimally compatible with the epistemic standards that Drew adopts.

Ultimately, this shows that the employments of the agents' epistemic standards do not take place on an arbitrary basis, but rather they are shaped, or in fact, more precisely, constrained by their cognitive abilities through which they can practice certain kinds of reasoning and processing in the most effective way. Therefore, since Mars and Drew, as Scientist A and Scientist B do, adopt and use their epistemic standards optimally truth-conducive way in alignment with their cognitive abilities, they form their beliefs in a non-arbitrary way.

4.2 Reply to Some Objections

Recall that we were questioning the notion of arbitrariness by considering two ways in which arbitrariness can be understood: (1) randomness like coin-flipping and (2) epistemically irrelevant factors as such. After providing an account for cognitive abilities by expanding Simpson's thesis, a new question arises: how should we assess cognitive abilities in relation to arbitrariness? This question arises in two different ways with regards to the two conceptions of the notion of arbitrariness. First, since cognitive abilities also depend on varying and seemingly random factors over which we do not have complete control such as our biology, environment, education, and so on, can we say that cognitive abilities are random and hence lead to arbitrary belief formations? Second, since cognitive abilities are not a part of things that lead us to truth like evidence, can we say that cognitive abilities are epistemically irrelevant factors and hence arbitrary?

4.2.1 Are Cognitive Abilities Random?

There are a couple of things we can say as an answer to these questions. Concerning the first, it is true that our cognitive abilities are influenced by various factors like biology, upbringing, environment, education, so and so forth, but it is important to discern that the agent herself does not choose her initial cognitive abilities and such various factors randomly like flipping a coin. Obviously, rational belief formation is something done by an agent who purposefully considers things like evidence, reliability, truth-conduciveness, etc. without flipping a coin; likewise, arational belief formation too is something done by an agent by, say, choosing a belief on the basis of coin-flipping. This entails that arbitrary belief formation requires the presence of an agent who forms her belief with random factors. In light of this point, we can say that the agent's initial cognitive abilities and various factors like biology, upbringing, environment, education are not random in the sense that *the agent herself* does not determine them by coin-flipping. Instead, they shape, if not completely, her cognitive abilities and the way she forms her beliefs by providing a basis for the processes in which she assesses evidence and forms beliefs. Thus, they are not arbitrary or random in the sense that the agent determines them in a random way like flipping a coin or without purpose. It cannot be argued, therefore, that since the formation of cognitive abilities are arbitrary, they are themselves arbitrary as well in the sense of random choice that the agent herself makes.

4.2.2 Are Cognitive Abilities Epistemically Irrelevant Factors?

If, on the other hand, we consider arbitrariness as epistemically irrelevant factors, then we can also say that cognitive abilities are not arbitrary. It is understandable why cognitive abilities may be seen as epistemically irrelevant factors, as it may be argued that they do not make a claim rational like evidence does. That is, it might be said that pieces of evidence are collected and assessed in order to form true belief, in which case the use of evidence is rational; for evidence makes us closer to truth, or it is truth-conducive. In contrast, cognitive abilities might be considered solely to be internal mechanisms that process or generate the evidence, rather than justificatory elements like evidence. Thus, it might be thought they are epistemically irrelevant factors in that they do not work as justifiers in the same way that evidence does. However, it is not adequate to think of them as epistemically irrelevant. To be clear, in the absence of cognitive abilities, we would not be able to form beliefs in the first place. They are the abilities we use to apply our epistemic standards to reach a rational conclusion. Thus, we can argue, in the end, that cognitive abilities are indeed epistemically *relevant* factors, thereby claiming that cognitive abilities are not arbitrary. So, we can see that on both accounts of arbitrariness, Simpson's framework that incorporates the notion cognitive abilities in belief formation does not lead to arbitrary belief formation, as cognitive abilities are not randomly picked out, nor are they epistemically irrelevant factors.

4.2.3 What If There is a Draw?

However, there is another worry: if an agent's cognitive abilities allow for, say, two epistemic standards that have equal compatibility and felicitous interaction with those cognitive abilities, thereby leading to equal optimally truth-conducive beliefs, then is adopting one epistemic standard over the other arbitrary? For example, suppose that a detective is equally good both at recognizing insincere testimony by being sensitive to subtle indicators of insincere speeches or acts *and* the holistic evaluation of the probative inferences of larger bodies of evidence, enabling her to use two epistemic standards, viz., evaluating the evidence one by one *and* as a set, in the equally optimally truth-conducive way. In other words, this detective does not have the disadvantages that Mars and Drew have, and her cognitive abilities constrain these two epistemic standards in the same way. So, regardless of which epistemic standard she employs, she will use it in the optimally truth-conducive way. If so, does arbitrariness partake in which epistemic standard she employs?[12]

At this point, it could be thought that Wu's proposal can relieve this worry; that is, epistemically irrelevant factors like personal stakes, interests, or practical concerns can play a role in which epistemic standards we adopt. As we have already seen on Wu's account, epistemically irrelevant factors like personal stakes, interests, or practical concerns influence and constrain epistemic standards in a systematic and non-random way, so our epistemic standards that lead to belief formation are not arbitrarily determined. Thus, if the agent finds herself in a situation in which her cognitive abilities allow for two epistemic standards that have equal compatibility and felicitous interaction with those cognitive abilities, thereby leading to equal optimally truth-conducive beliefs, then she can use one epistemic standard over the other in accordance with her personal stakes, interests, or practical concerns. For example, if the detective is

[12] Thanks to Demircioğlu for raising this objection.

told by her supervisor that she is supposed to evaluate the evidence one by one instead of evaluating as a set, then it would be more practical for her to use this method in that she would not be fired due to not complying with the rules that her supervisor lays down. For this reason, she chooses to employ this epistemic standard over the other despite the fact that the other would be used in the equally optimally truth-conducive way. Nevertheless, this epistemic standard is held non-randomly, and hence non-arbitrarily, because there is a systematic reason for favoring this standard: she holds her epistemic standard according to a fixed plan, rule, or system, viz., applying the method that her supervisor tells her to apply.

Here, as we can remember, we see the same point that Wu makes. In order to say that the detective's choice of one epistemic standard over the other one is not arbitrary, we need to regard arbitrariness only as randomness like coin-flipping and say these epistemically irrelevant factors do not make any negative impact on the choice by bringing arbitrariness, because their influence is not random, but rather systematic. However, it is also possible to think about a scenario in which the detective has no such a pragmatically differentiating factor like the supervisor who tells her what methods to use, how to consider evidence, and so on. So, when she is on her own, how can we explain the choice between these two standards?

At first sight, this case may in fact seem arbitrary, as there seems to be no systematic or non-random choice to guide her choice of epistemic standards. Nonetheless, we can still see a non-arbitrary choice. For given two equally truth-conducive epistemic standards that are constrained in the exact same way by the agent's cognitive abilities, when the agent is to choose one epistemic standard over the other, this choice can still be guided by her *personal epistemic habits* or *preferred ways of evaluating evidence*—which she has acquired and developed over time rather than chosen in a random way. One simple non-epistemic practical analogy can help illustrate this point: one might choose to walk instead of run to reach a destination despite the fact that both methods would actually achieve the same goal equally well. After arriving, when asked why he chose to walk rather than run, he may reply, "Because I *generally* walk when I go somewhere even though I can also run for hours." In short, his choice is not arbitrarily made by, say, flipping a coin. Instead, it is guided by his personal habits or preferred ways of reaching destinations. Likewise, one may choose one epistemic standard over the other in case of two equally rational epistemic standards that are constrained in the exact same way by the agent's cognitive abilities, and this choice can reflect her habitual or preferred ways of assessing evidence rather than random selection.

Suppose, for example, that an agent is trying to figure out whether it will rain tomorrow, and that she has two competing epistemic standards that she can use equally optimally truth-conducive way in accordance with her cognitive abilities such as (1) the direct analysis of numerical forecast data like probabilities and mm rain, and (2) the comparison of visual radar or satellite maps to recognize rain patterns. For she is skilled at both numerical synthesis and pattern recognition on the basis of visual forecast data. Suppose, further, that on the particular day, she checks the numerical data instead of the visual radar or satellite maps in her research and eventually forms the belief that it will rain tomorrow. Although she is equally adept at using both methods and occasionally checks radar or satellite maps, she usually prefers checking numerical data when she wants to learn about the weather. This, over time, has become her habitual or preferred way of evaluating forecast data—a method on which she has started to rely. That means, in the end, that she does not come to a decision about which method to use by flipping a coin, and thus her choice of method is not arbitrary, but rather guided by her habitual or preferred way of evaluating evidence.

Similarly, although the detective who can use two epistemic standards in the equally optimally truth-conducive way without any pragmatically differentiating factor like the supervisor who tells her what methods to use or how to consider evidence, she may want to choose the method in which she evaluates evidence as a set, because it appears to be in line with her habitual or preferred way of evaluating evidence which she has developed over many years. That is, it does not mean that this method is better than the other one in this case, but rather that it is indeed more compatible or coherent with her general practices of formation of belief. Likewise, it may well be the case that her personal epistemic habits or consistent ways of evaluating evidence are more compatible and coherent with the other method, in which case she may choose to evaluate the evidence one by one. It can be seen, therefore, that even in such a seemingly problematic situation, adopting one epistemic standard over the other does not appear to be arbitrary in that the choice of one epistemic standard over the other is systematic and non-random.

At this point, we have just seen that when arbitrariness is considered as randomness, the choice of the detective is not arbitrary. Yet, it must also be noted that when we think of arbitrariness as the inclusion of epistemically irrelevant factors in formation of beliefs, such a choice is still not arbitrary.

The worry could be this: our habitual or preferred ways of evaluating evidence could have been otherwise due to different experiences, education, biology, upbringing, environment, so and so forth; so do they depend upon epistemically irrelevant factors? For it is true that our habitual or preferred ways of evaluating evidence are influenced or shaped by epistemically irrelevant factors like experiences, education, biology, upbringing, environment, and so on. For instance, in relation to our examples, the one who usually uses numerical data to check the weather while being equally good at using radar or satellite maps could have usually used the maps; or the detective who generally uses the method in which she evaluates evidence as a set while being eqully good at evaluating evidence as a whole could have generally used the method in which she evalutes evidence as a whole for some reason.

As we can remember, we raised the same concern for cognitive abilities too. We have seen, however, that unlike epistemically irrelevant factors, they are in fact epistemically relevant factors in that without cognitive abilities, we would not be able to form beliefs in the first place. In other words, they are crucial elements in the way to forming rational beliefs, as we use or rely on them to apply our epistemic standards so as to reach a rational conclusion. In the same vein, our habitual or preferred ways of evaluating evidence are epistemically relevant factors as well. For just like cognitive abilities, they play a role in forming rational doxastic attitudes: they help us form our rational doxastic attitudes by directing our attention for examination and the ways in which we encounter and assess data in an efficient way. That is to say, unlike epistemically irrelevant factors (e.g., where we were born, how we were raised, what school we happened to attend, personal stakes, interests, and practical concerns), our habitual or preferred ways of evaluating evidence shape how we deal with evidence itself by reducing the cognitive effort used in the evaluation of evidence, in which case they help us reach the truth rather than merely express non-epistemic or practical motives. Over time, these habitual or preferred ways of evaluating evidence start working in a stable, systematic, and consistent way, and eventually they enhance our rational belief formation by rendering the use of our cognitive abilities more efficient.

When, for example, the detective evaluates evidence as a set, as this is her habitual or preferred way of reasoning, she does not have to start from the very beginning every time she gathers new data by testing the reliability of her method. Rather, after seeing the reliability of this particular method over time, she starts relying on this familiar method, and it helps her in the course of her analysis by allowing her to process and examine data more efficiently, thereby reducing unnecessary cognitive workload, and avoiding irrelevant or inefficient reasoning steps. We can thus ascertain that habitual or preferred ways of reasoning are epistemically relevant factors and non-arbitrary. After all, we can see, therefore, that even in situations in which there are, say, two equally truth-conducive epistemic standards that are constrained in the exact same way by the agent's cognitive abilities, it is not arbitrary for the agent to hold one epistemic standard over the other according to both conceptions of the notion of arbitrariness.

Chapter 5

CONCLUSION

In this thesis, I delved into the debate between Uniqueness and Permissivism, the central question of which is: given a body of evidence E, is there always one epistemically rational doxastic attitude to the proposition P? I stated that Uniqueness answers this question positively, whereas Permissivism answers negatively, and gave a description of these two positions. Then I focused on one specific objection directed toward Permissivism, posed by the proponents of Uniqueness, specifically White (2005, 2014)—which is called the arbitrariness objection. My objective here was to defend Permissivism against the arbitrariness objection.

According to this objection, if it is possible to espouse multiple epistemically rational doxastic attitudes as a response to the same body of evidence, then the adoption of doxastic attitudes seems to be arbitrary, and thus not rational. I set out the objection as the following:

> *Premise 1*: If one rationally accepts that she is in a permissive case, then it is rational for her to have a doxastic attitude arbitrarily.
> *Premise 2*: It is not rational to have a doxastic attitude arbitrarily.
> *Conclusion:* One cannot rationally accept that she is in a permissive case.

Then, throughout the thesis, I responded to this argument by arguing against Premise 1 on the basis of rejecting the charge of arbitrariness so as to defend Permissivism.

I began with taking a look at some leading responses to the arbitrariness objection and introduced Schoenfield's (2014) proposal "Standard-Permissivism" through which she argues that since people possess different epistemic standards, they can have different doxastic attitudes as a response to the same evidence. Then, after stating some responses to her proposal, I presented Simpson's view by which he argues for Permissivism through developing Standard-Permissivism:

> [The agent uses her own] epistemic standards that are optimally truth-conducive for her, given (i) her cognitive abilities, and (ii) the felicitous interaction between her standards and her cognitive abilities." (2017, p. 534)

To explain his view, I restated his own example: two detectives reach the exact opposite conclusions in their investigation as a response to the same body of evidence, but still both are rational, as they use different epistemic standards that interact with their cognitive abilities.

After that, I built on Simpson's idea and shedded light on the interaction between cognitive abilities and epistemic standards by arguing that cognitive abilities constrain epistemic standards in such a way that an agent's epistemic standards must match what she is capable of. I gave a couple of examples to illustrate how this intraction and constraint relation takes place. By doing so, I argued that Simpson's account that I developed not only provides us with a more expository framework of cognitive abilities and epistemic standards, but also overcomes the arbitrariness objection more effectively.

To show how, I examined the notion of arbitrariness in detail by touching upon two conceptions of it such as (1) arbitrariness as epistemically irrelevant factors (personal stakes, where we were born, how we were raised, what school we happened to attend, etc.) and (2) arbitrariness as mere randomness (e.g., coin-flipping), and demonstrated that cognitive abilities and epistemic standards fall under neither of these categories. I put forward that cognitive abilities are indeed epistemically relevant factors, as they are the abilities that we use to apply our epistemic standards, and that an agent's adoption and use of epistemic standards can be guided in a systematic way by the method through which she best handles evidence according to her cognitive abilities. In this way, I gave an answer to that possible objection that since cognitive abilities are arbitrary, an account of Permissivism including cognitive abilities does not successfully deals with the arbitrariness objection.

Lastly, I addressed one possible objection that if an agent's cognitive abilities allow for, say, two epistemic standards that have equal compatibility and felicitous interaction with those cognitive abilities, paving the way for equal optimally truth-conducive beliefs, then is holding one epistemic standard over the other arbitrary? I responded to this objection by arguing that even in such a case, adopting one epistemic standard over the other is not arbitrary, because I put that what plays a role in the agent's adoption of one epistemic standard over the other is her habitual or preferred ways of evaluating evidence that are neither random nor epistemically irrelevant factors. Instead, I said that they are acquired and developed by the agent non-randomly, and that they shape the way in which we handle evidence itself by reducing the cognitive effort used in the evaluation of evidence. After all, I showed that my defense of Permissivism that I build on Simpson's proposal remains intact.

So, after our inquiry of the Permissivism vs. Uniqueness debate with a focus on the arbitrariness objection and after examining, contributing to, and responding to possible objections against Simpson's thesis, I conclude that if two agents come to have two different doxastic attitudes as a response to the same body of evidence, the formation of their doxastic attitudes is not arbitrary. Thus, we can say that Premise 1 of the arbitrariness objection (viz., "If one rationally accepts that she is in a permissive case, then it is rational for her to have a doxastic attitude arbitrarily") does not hold, because as I demonstrated, even though an agent can rationally acknowledge being in a permissive case, this does not follow that her doxastic attitude is formed in an arbitrary manner, as it is indeed systematically or non-randomly guided and shaped by her epistemic standards and cognitive abilities. Ultimately, since Premise 1 of the arbitrariness objection does not hold, the arbitrariness objection is untenable and fails to refute Permissivism by undermining rationality of beliefs in permissive cases. Therefore, in the end, one can still rationally accept that she is in a permissive case.

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