JUSTIFIED TRUE BELIEFS, THE GETTIER PROBLEM, AND CRIMINAL KNOWLEDGE IN THE MODEL PENAL CODE

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I. INTRODUCTION: THE JTB MODEL AND THE GETTIER PROBLEM

When a layperson is asked to explain the term "knowledge," the reaction is almost always hesitation. It is not because comprehension of the term requires some level of sophistication beyond an ordinary person's mental capacity, but because "knowledge" seems to be self-explanatory—whenever a rational person claims to "know" *P*, he immediately knows that he knows *P* without the need to invoke any external references.[1] But the statement "I know *P* because I know that I know *P*" does not provide any objective and verifiable standard of knowledge, attributing the explanatory authority to the knower based purely on his private experience.

In both criminal law and philosophy, however, the term "knowledge" does call for a shared and ascertainable, if not "correct," definition. When the verdict dictates that the condemned "knowingly" caused the alleged harm or performed the alleged conduct after a criminal trial, criminal knowledge serves a dual purpose of determining whether the law has been violated and, if so, the level of severity of the offense.[2] Judges and juries should determine on a clear, unified, and unambivalent standard to assess whether the condemned "knew" the existence of a particular fact or the likelihood of the result of the alleged conduct, regardless of whether knowledge is a statutory element of the alleged offense. Meanwhile, the definition of knowledge in criminal law does not require perfect certainty—it is capable of tolerating some degree of vagueness, some level of generality, and some extent of flexibility. After all, if the definition, whatever it is, when applied to particular fact patterns, leads to counterintuitive or contradictory conclusions, it is up to the discretion of the

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1. *But see* Fred I. Dretske, *I Think I Think, Therefore I Am—I Think: Skeptical Doubts About Self-Knowledge*, *in* CONSCIOUSNESS AND THE SELF: NEW ESSAYS 150, 156–58 (JeeLoo Liu & John Perry eds., 2011). In this essay, Professor Dretske argued, *inter alia*, that the knowledge of *P* does not always entail the knower's awareness of the fact that he knows *P*.

2. *See, e.g.*, MODEL PENAL CODE § 220.2(1) (AM. L. INST. 1985). Under the MPC, knowingly causing a catastrophe is a felony of the second degree, whereas recklessly causing a catastrophe is a felony of the third degree.

prosecutor, the judge, and especially the jury to reach a sensible and intuitive conclusion.[3]

Philosophers, on the other hand, have historically taken a very different approach. Instead of being satisfied with simply providing a workable definition of the term, epistemologists aim at precision, i.e., that the best definition should draw a precise line of demarcation between what is "knowledge" and what is not. Ambiguities are not tolerated, and the definition should strictly adhere to laypersons' commonsensical understanding of the term. One of the earliest discussions of "knowledge" in the West can be traced back to Plato's *Theaetetus*, in which Socrates denied that any true belief could be qualified as knowledge.[4] Instead, knowledge is, at the very least, "true opinion accompanied by reason."[5] In modern terminology, this model of knowledge is often called the "JTB model," i.e., one knows *P if and only if* one has a justified (J) true (T) belief (B) regarding *P*. Although an array of novel definitions of "knowledge" was postulated in the history of philosophy, philosophers during the first half of the twentieth century generally agreed that the JTB model is sufficient to define what "knowledge" is, at least within the epistemological tradition.[6]

However, in 1963, Professor Edmund Gettier published a two-page article titled "Is Justified True Belief Knowledge?" in which he practically defeated the JTB model by two hypotheticals.[7] Both cases in the article show that one could acquire a justified true belief merely as a result of epistemic luck. The argument, in a way, echoes Socrates's observation that a true belief, justified or not, if merely resulted from a happenstance unaware by the subject, cannot be sufficiently qualified as "knowledge."[8] For instance, consider the following case from Alvin Goldman:

> Henry is driving in the countryside with his son. For the boy's edification Henry identifies various objects on the landscape as they

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3. *See, e.g.*, Morissette v. United States, 342 U.S. 246, 274 (1952) ("[T]he question of intent can never be ruled as a question of law, but must always be submitted to the jury."); MODEL PENAL CODE & COMMENTARIES § 2.02 cmt. 2, at 234–35 (AM. L. INST. 1985) ("In the Code's formulation, both 'purposely' and 'knowingly' . . . are meant to ask what, in fact, the defendant's mental attitude was. It was believed to be unjust to measure liability for serious criminal offenses on the basis of what the defendant should have believed or what most people would have intended.").

4. *See* PLATO, THEAETETUS, 200d–201c (Harold N. Fowler, trans., Harvard Univ. Press 1921) (c. 369 B.C.E.).

5. *Id.* at 201c–d.

6. *See* STEPHEN HETHERINGTON, KNOWLEDGE AND THE GETTIER PROBLEM 1–2 (2016); Edouard Machery et al., *Gettier Across Cultures*, 51 NOÛS 645, 645 (2015); RODERICK M. CHISHOLM, THEORY OF KNOWLEDGE 92 (3d ed. 1989). *But see* Pierre Le Morvan, *Knowledge Before Gettier*, 25 BRITISH J. FOR HIST. PHIL. 1216, 1230 (2017) (arguing the paucity of pre-1963 articles endorsing the JTB model implies that the JTB model was not widely accepted in pre-Gettier epistemology).

7. *See generally* Edmund L. Gettier, *Is Justified True Belief Knowledge?*, 23 ANALYSIS 121 (1963).

8. *See* PLATO, *supra* note 4, at 200d–201c.

> come into view. "That's a cow," says Henry, "That's a tractor," "That's a silo," "That's a barn," etc. Henry has no doubt about the identity of these objects; in particular, he has no doubt that the last-mentioned object is a barn, which indeed it is. Each of the identified objects has features characteristic of its type. Moreover, each object is fully in view, Henry has excellent eyesight, and he has enough time to look at them reasonably carefully, since there is little traffic to distract him . . . . [However, s]uppose we are told that, unknown to Henry, the district he has just entered is full of papier-mâché facsimiles of barns. These facsimiles look from the road exactly like barns, but are really just façades, without back walls or interiors, quite incapable of being used as barns. They are so cleverly constructed that travelers invariably mistake them for barns. Having just entered the district, Henry has not encountered any facsimiles; the object he sees is a genuine barn. [9]

In this case, Henry has a true (T) belief (B) that the object he encountered was a barn, and he has a pretty good justification (J) for it, as his eyesight is generally reliable. However, most people would be hesitant to say that Henry actually "knows" what he just saw is actually a barn because (1) it is unknown to Henry that he should be cautious to distinguish between facsimiles and real barns when passing through this particular countryside, (2) had Henry known that this countryside is full of facsimiles, he would not call the object he saw a "barn" with reasonable confidence. In other words, Henry's justified belief came to be true merely as a matter of luck. Therefore, even when an individual's mental state satisfies all knowledge conditions under the JTB model, he may nonetheless lack epistemic knowledge. Since Professor Gettier's paper, philosophers have attempted to construct new definitions of knowledge by redefining a condition within J, T, or B (especially J),[10] adding a "fourth condition" on top of J, T, and B,[11] replacing a condition or conditions from J, T,

9. Alvin I. Goldman, *Discrimination and Perceptual Knowledge*, 73 J. PHIL. 771, 772–73 (1976). Though it is not one of Professor Gettier's original cases, it is perhaps one of the most famous Gettier cases in twentieth century epistemology.

10. *See, e.g.*, ALFRED J. AYER, THE PROBLEM OF KNOWLEDGE 34 (1956) (arguing that justification requires "the right to be sure").

11. *See, e.g.*, Michael Clark, *Knowledge and Grounds: A Comment on Mr. Gettier's Paper*, 24 ANALYSIS 46, 47 (1963) (arguing that the fourth condition is that the belief must be "fully grounded").

and B,[12] or entirely shifting away from the JTB model.[13] Some, however, admitted that the Gettier problem is logically irresolvable.[14]

What is the relevance, if any, of the controversy of "knowledge" in epistemology to criminal law? After all, criminal knowledge, at least as explicitly defined in U.S. criminal laws, generally requires neither "truth" nor "justification," not to mention the more demanding post-Gettier knowledge conditions such as "reliability," "sensitivity," or "aptness."[15] The concept of criminal knowledge as we know it today originated from criminal law's traditional distinction between "specific intent" and "general intent"[16] with an aim to "punish the 'vicious will'" of the defendant.[17] More specifically, at least in the Model Penal Code (MPC), the term "knowingly" serves only a narrow purpose of assigning culpability to actions with a particular nature or causes a particular result that is not the conscious object of the actor, but in performing which the actor is *aware* of such a nature or result.[18] Hence, criminal knowledge, in a way, can be viewed as a fundamentally different concept from knowledge in epistemology. This is perhaps why, although Gettier cases caught the academia's attention in evidence law,[19] articles exclusively focusing on the Gettier problem's implication for *mens rea* are rather sparse. Even within those limited discussions, many authors are reluctant to proceed further than asserting that criminal law sets a much lower standard of knowledge than epistemology, and the Gettier problem is way beyond the scope of determining one's *mens*

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12. *See, e.g.*, FRED I. DRETSKE, KNOWLEDGE & THE FLOW OF INFORMATION 89 (1981) (arguing that justification should be replaced by the condition of "sustaining cause," i.e., the belief must be causally sustained by the information sufficient to support that belief).

13. *See, e.g.*, 1 ERNEST SOSA, A VIRTUE EPISTEMOLOGY: APT BELIEF AND REFLECTIVE KNOWLEDGE 23–25 (2007) (arguing for the "AAA model" of knowledge: an apt (A) belief that is accurate (A) and resulted from an adroit (A) believing skill would be sufficient at least for "animal knowledge").

14. *See, e.g.*, Linda Zagzebski, *The Inescapability of Gettier Problems*, 44 PHIL. Q. 65, 67, 69, 72 (1994) (arguing given that "justification" does not, and should not, entail "truth" by itself, one could always manufacture Gettier cases in the gap between "truth" and "justification").

15. *See, e.g.*, MODEL PENAL CODE § 2.02(2)(b) (AM. L. INST. 1985). In the MPC, knowledge requires only some sort of "awareness" under the particular circumstance without explicitly mentioning J or T conditions.

16. *See* United States v. Bailey, 444 U.S. 394, 405 (1980) ("In a general sense, 'purpose' corresponds loosely with the common-law concept of specific intent, while 'knowledge' corresponds loosely with the concept of general intent."). *See also* MODEL PENAL CODE & COMMENTARIES § 2.02 cmt. 2, at 233 (AM. L. INST. 1985) (indicating that both "purposely" and "knowingly" as defined in the MPC sprang from the term "intent"); Kevin Cole, *Knowledge and Belief As Criminal Law Mental States*, 16 OHIO ST. J. CRIM. L. 441, 450 (2019) ("During the era of general intent crimes, some signal may have been needed to indicate that, for certain crimes, proof of culpability *regarding particular elements* was essential. . . . '[K]nowledge' may have simply been the best way to send those signals.").

17. Ruan v. United States, 142 S. Ct. 2370, 2376 (2022).

18. *See* MODEL PENAL CODE & COMMENTARIES § 2.02 cmt. 2, at 233 (AM. L. INST. 1985).

19. *See generally, e.g.*, Robert M. Sanger, *Gettier in a Court of Law*, 42 S. ILL. U. L.J. 409 (2018); Michael S. Pardo, *The Gettier Problem and Legal Proof*, 16 LEGAL THEORY 37 (2010).

rea.[20] Others, while attempting to analyze knowledge in criminal law under epistemological models, tend to rely on the traditional JTB model while only mentioning the Gettier problem in footnotes as a matter of curiosity.[21]

Such a rationale would indeed face a strenuous protest from a hypothetical epistemologist who maintains that knowledge bears only one definition (although yet to be fully defined). At the very least, in adjudicating Gettier cases, it is theoretically possible under current U.S. criminal laws to convict someone for "knowingly" committing an offense without possessing the epistemic knowledge.[22] Whether this could be legally, constitutionally, or normatively problematic may depend on the jurisprudence, constitutional interpretation, and ethical framework one holds. These are not the focus of this Note. However, even for those who do not see the disparity between the different definitions of knowledge as problematic, Gettier cases' applications in criminal law may nonetheless reveal some perplexing and perhaps unnerving inconsistencies in criminal adjudications. Adopting the MPC as the statutory basis, the purpose of this Note is to address two general questions: (1) what are the implications of the pre-Gettier JTB model to "knowledge" or "knowingly" as defined under the MPC and (2) what are the implications of Gettier cases to criminal knowledge, also as defined under the MPC. This Note concludes that, firstly, although the MPC did not explicitly adopt the language of "justified true belief" in defining knowledge, both J and T conditions are relevant in criminal adjudications. In particular, the lack of the J condition may trigger the "De minimis Infractions" provision, and the T condition inversely affects defendants' ability to invoke § 2.04 and § 5.05(2) defenses. Secondly, Gettier cases pose challenges to the current formulation of knowledge mainly by showing that the result of applying the current definition of knowledge under the MPC can be incoherent with the logic behind the MPC's grading mechanism, and there are no available legal cures to this problem. With the understanding of the variety of types of Gettier cases, this Note focuses exclusively on cases involving "veritic epistemic luck," a term first coined by Mylan Engel.[23]

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20. *See, e.g.*, Gregory M. Gilchrist, *Willful Blindness as Mere Evidence*, 54 LOY. L.A. L. REV. 405, 430 (2021) ("The use of knowledge in criminal law, however, is less epistemically pure and more instrumental."); Alexander F. Sarch, *Knowledge, Recklessness and the Connection Requirement Between Actus Reus and Mens Rea*, 120 PENN ST. L. REV. 1, 16–17 (2015) (arguing that knowledge in criminal law is "significantly weaker than the one used by philosophers").

21. *See, e.g.*, Alan R. Hancock, *True Belief: An Analysis of the Definition of "Knowledge" in the Washington Criminal Code*, 91 WASH. L. REV. ONLINE 177, 179 n.14 (2016).

22. *See* Gilchrist, *supra* note 20, at 430 ("Classic examples of the Gettier problem simply do not pose a challenge to the legal standard of knowledge; they would almost certainly be sufficient to establish knowledge for purposes of criminal liability, even as they confound philosophers.").

23. *See* Mylan Engel, *Is Epistemic Luck Compatible With Knowledge?*, 30 S. J. PHIL. 59, 67 (1992).

II. JUSTIFIED TRUE BELIEF AND CRIMINAL KNOWLEDGE

The purpose of this section is to outline the relationship between the traditional JTB model and MPC's definition of knowledge. In particular, it shows (1) there is a mismatch between MPC's definition and the commonsensical meaning of "know," "knowingly," or "knowledge," (2) the mismatch may lead to counterintuitive legal consequences when courts face situations involving "*unjustified* true beliefs" and "justified *false* beliefs," two classic epistemological scenarios in the pre-Gettier era, and (3) J and T conditions are relevant to the existence of alternative mitigating provisions under the MPC.

A. Knowledge and Awareness

In the MPC, "knowingly" is defined as:

> Knowingly. A person acts knowingly with respect to a material element of an offense when:
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> (i) if the element involves the nature of his conduct or the attendant circumstances, he is aware that his conduct is of that nature or that such circumstances exist; and
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> (ii) if the element involves a result of his conduct, he is aware that it is practically certain that his conduct will cause such a result.[24]

Although "knowingly" and "with the knowledge of (the nature or the attendant circumstance of the conduct, or the result of the conduct)" may convey different semantical meanings under different contexts, the distinction is absent in the MPC. For example, § 2.02(5) and § 2.02(9) both adopt the word "knowledge" interchangeably with "knowingly."[25] Pursuant to the presumption of consistent usage,[26] the only difference between "knowingly" and "with the knowledge of" in the MPC seems to be grammatical, not substantive.

However, MPC's definition of "knowingly" does not precisely reflect a layperson's understanding of the term "knowledge." Both § 2.02(2)(b)(i) and (ii) adopt the term "aware" as an underlying condition of "knowledge," but the semantical distinction between "knowledge," at least as an epistemological concept, and "awareness" is beyond mere grammar. For instance, assume that a usually reliable clock ran out of battery and stopped at 11:30.[27] When its owner checked with it before going to bed, he was "aware"

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24. MODEL PENAL CODE § 2.02(2)(b) (AM. L. INST. 1985).

25. *See id.* § 2.02(5) (titled "Substitutes for Negligence, Recklessness, and *Knowledge*" (emphasis added)); *id.* § 2.02(9) ("Neither *knowledge* nor recklessness or negligence as to whether conduct constitutes an offense or as to the existence, meaning or application of the law determining the elements of an offense is an element of such offense . . . ." (emphasis added)).

26. *See, e.g.*, U.S. Nat'l Bank of Or. v. Indep. Ins. Agents of Am., Inc., 508 U.S. 439, 460 (1993) ("Presumptively, 'identical words used in different parts of the same act are intended to have the same meaning.'" (quoting Comm'r v. Keystone Consol. Indus., 508 U.S. 152, 159 (1993)).

27. The "stopped clock" case was first introduced by Bertrand Russell. *See* BERTRAND RUSSELL, HUMAN KNOWLEDGE: ITS SCOPES AND LIMITS 170 (George Allen & Unwin 1948). Interestingly, the book was published before Gettier's paper.

that it was 11:30 PM—given the fact that the clock was usually reliable and the clock owner's observation that it was dark outside. Nonetheless, even if the time was, in fact, 11:30 PM, it is at least counterintuitive to assert that the clock owner *knew* what the time was, since he could have been easily misguided by the clock had he checked the time a little earlier or later. However, given that the clock owner was conscious at the time he checked the time, no one would dispute that the clock's owner was *aware* of the fact that the time was 11:30 PM. In other words, while knowledge is negated by Gettier cases as such, awareness is not.

Moreover, one could be aware of a proposition that turns out to be false, whereas it would be a contradiction to "know" something that is false. For example, when the bell rang at 7:00 PM, the kid might aware that her mother has just returned home, as the mother normally comes back home and rings the bell around that time.[28] If it turned out it was the mailman who rang the bell, the kid could not be said to have possessed the "knowledge" of the fact that the mother had just returned home, as the falsehood of the fact negates knowledge. However, the kid's prior "awareness" was not negated by the falsehood of the fact. Awareness is more or less a fact about one's mental state whose existence is unconnected to the truth of the object of awareness.

Subsequently, another distinction between knowledge and awareness is that the former need not be conscious,[29] but the latter is, almost by definition, occurrent with consciousness.[30] When a law student is taking an exam on criminal law, he (of course, hopefully) *knows* that a contract is a bargained exchange for considerations. Such knowledge is not imputed or speculative but what he subjectively and actually knows. However, when he was preoccupied with a complicated question on *mens rea*, whether a contract requires consideration was indeed not what he was consciously aware of *at that moment*. Similarly, knowledge of his own age, the result of $2 + 5$, and the ordinary taste of an apple are all non-occurrent to the exam taker while taking the exam, assuming they are completely irrelevant to the questions in the exam. Conversely, at least outside of the legal context,[31] laypersons would not

28. This case is inspired by Professor Dretske's paper. *See* Drestke, *supra* note 1.

29. *But see* United States v. U.S. Gypsum Co., 438 U.S. 422, 445 (1978) ("In either [purpose or knowledge], the defendants are *consciously* behaving in a way the law prohibits, and such conduct is a fitting object of criminal punishment." (emphasis added)).

30. *See* Kenneth W. Simons, *Should the Model Penal Code's Mens Rea Provisions Be Amended?*, 1 OHIO ST. J. CRIM. L. 179, 195 (2003) (advising the MPC to adopt a clearer distinction "between belief and knowledge, on the one hand, and consciousness and awareness, on the other" to set the standard for "different degrees or types of consciousness."). *But see* Douglas Husak, *Negligence, Belief, Blame and Criminal Liability: The Special Case of Forgetting*, 5 CRIM. L. & PHIL. 199, 208–09 (2011) (arguing that awareness, at least under criminal law, as belief, could be non-occurrent).

31. Within the legal context, some authors would agree that awareness, as defined under the MPC, can be non-occurrent. *See* Husak, *supra* note 30; James A. Macleod, *Belief States in Criminal Law*, 68 OKLA. L. REV. 497, 526–27 (2016) ("whether the defendant was aware of the risk depends on whether awareness is occurrent or dispositional . . . .").

ordinarily use the term "aware" as to denote a mental state that is unconscious of what it is presumptively aware of.

The discrepancy between the ordinary meaning of knowledge and awareness may imply legal consequences when the law treats them alike. Although many scholarly articles attempt to contribute to this area, the following subsection focuses on one particular problem not often addressed: the lack of J and T conditions (among those who addressed the applicability of J and T conditions in criminal law, most focus on the differences than similarities between law and epistemology).[32] As the following subsections show, the omission of the traditional epistemological conditions could cause both theoretical and practical problems to courts in adjudicating the types of cases with knowledge conditions that philosophers might have considered back to Socrates's time.

B. "Unjustified True Beliefs" and "Justified False Beliefs" in the MPC

If "justified true belief" remains at least necessary for knowledge in modern epistemology (though not sufficient in the light of Gettier cases), the extent to which truth and justification are required in determining knowledge under criminal law is a more complicated question. Indeed, under both contexts, knowledge necessarily consists of a *belief* plus some other qualifications. But current U.S. criminal laws, especially the MPC, do not usually adopt terms such as "truth" and "justification." Still, this section concludes that both elements are, in fact, relevant in determining culpability by presenting a brief overview of how cases involving mental states of "*unjustified* true beliefs" and "justified *false* beliefs" are treated under the current version of the MPC.

C. Unjustified True Beliefs

As a principle deeply embedded in epistemological traditions, a true belief *per se* cannot be qualified as "knowledge."[33] In criminal law, however, whether a true belief alone can be qualified as knowledge is subject to scholars' debates. For example, Charlow and Gilchrist both argued that a true belief without any justification should be sufficient for knowledge.[34] Others argue that "justification" could be necessary for criminal knowledge,[35] and the U.S. Supreme Court, in dictum, has endorsed this view under a non-criminal

32. *See, e.g.*, Gilchrist, *supra* note 20; Sarch, *supra* note 20.

33. PLATO, *supra* note 4.

34. *See* Robin Charlow, *Wilful Ignorance and Criminal Culpability*, 70 TEX. L. REV. 1351, 1376 (1992) ("[C]riminal knowledge is a subjective belief in or near certainty about a past or present true or existent fact."); Gilchrist, *supra* note 20, at 431 ("For purposes of criminal law, knowledge need not be justified.").

35. *See, e.g.*, Eric A. Johnson, *Knowledge, Risk, and Wrongdoing: The Model Penal Code's Forgotten Answer to the Riddle of Objective Probability*, 59 BUFF. L. REV. 507, 513 (2011) ("There is a difference, of course, between what the actor knew and what she believed; in order to qualify as knowledge, a belief must be (at the very least) true and justified." (citation omitted)).

context.[36] On the surface, the MPC seems to take the former view—under a literary reading of MPC § 2.02(2)(b), a belief, true or not, accompanied by a *subjective* belief in or certainty about is sufficient for knowledge.[37] As a result, knowledge in law could be ascribed to those who are deeply irrational in their beliefs. For instance, assume a car dealer purchased an ordinary yellow convertible for the purpose of reselling and paid roughly its fair market value. The dealer was irrationally but deeply convinced that any yellow convertible worth at least $1 million, so he "naturally" believed that he had purchased the car at a price significantly below its market value. Premised on an irrational belief, he then "reasonably" speculated that the car was stolen. Assume further that the convertible was, in fact, stolen. In this situation, he could have been *convicted* for "Receiving Stolen Property" according to MPC § 223.6,[38] under which knowledge is presumed for dealers who *knows* that he acquired the property "far below its reasonable value."[39] Although no reasonable person would say that the car dealer in this case "knows" that the car was stolen, such knowledge is imputed according to MPC § 2.02(7), i.e., "[w]hen knowledge of the existence of a particular fact is an element of an offense, such knowledge is established if a person is *aware of a high probability* of its existence, unless he actually believes that it does not exist."[40] Since the dealer was subjectively aware that the car is likely a stolen car (although under an irrational premise), he met all elements required under "Receiving Stolen Property."

Indeed, such a counterintuitive conviction is inconsistent with the purpose of criminal law. However, although the problem, in essence, lies in § 2.02(2)(b) and § 2.02(7)'s crude definitions of knowledge, it was addressed by authorizing the court with broad discretion to dismiss the case altogether under § 2.12:

> De minimis Infractions. The Court shall dismiss a prosecution if, having regard to the nature of the conduct charged to constitute an offense and the nature of the attendant circumstances, it finds that the defendant's conduct:
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> . . . .
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> (2) did not actually cause or threaten the harm or evil sought to be prevented by the law defining the offense or did so only to an extent too trivial to warrant the condemnation of conviction; or

36. *See* Daubert v. Merrell Dow Pharms., Inc., 509 U.S. 579, 590 (1993) (in determining the admissibility of scientific knowledge from an expert witness, the Court stated that "the word 'knowledge' connotes more than subjective belief or unsupported speculation.").

37. MODEL PENAL CODE §§ 2.02(2)(b)(i)–(ii) (AM. L. INST. 1985) (both provisions adopt the language "he is aware").

38. *See id.* § 223.6(1) ("A person is guilty of theft if he purposely receives, retains, or disposes of movable property of another *knowing* that it has been stolen, or *believing* that it has probably been stolen . . . ." (emphasis added)).

39. *Id.* § 223.6(2)(c) ("The requisite knowledge or belief is presumed in the case of a dealer who . . . being a dealer in property of the sort received, acquires it for a consideration which he knows is far below its reasonable value.").

40. *Id.* § 2.02(7) (emphasis added).

> (3) presents such other extenuations that it cannot reasonably be regarded as envisaged by the legislature in forbidding the offense. [41]

Under this rationale, the hypothetical dealer who purchased the stolen car is excused not because of the lack of knowledge, but because the case was too trivial or too novel to be possibly contemplated by the drafters. This line of reasoning, i.e., that the dealer has the knowledge that he was reselling a stolen car but the case should be dismissed on other grounds, is absurd in itself: any rational person would conclude that the dealer did not actually know that the car was stolen and there is no point to require the court to invoke § 2.12 as an "extra-epistemological" cure.[42] The determination of the dealer mental state was inadequate in the first place. Another potential cure can be found under § 5.05(2), which allows for mitigation or dismissal of *criminal attempts* that are "so inherently unlikely to result or culminate in the commission of a crime that neither such conduct nor the actor presents a public danger warranting the grading of such offense."[43] However, the purpose of § 5.05(2) is limited to curing "unduly harsh"[44] sentences relating to criminal attempts, which is indeed narrower in scope than § 2.12. Additionally, § 6.12, as cited in § 5.05(2), does not permit the altogether dismissal of the case.[45]

The same is true in non-MPC jurisdictions. Conducts committed under an obviously unjustified belief may be categorized as "'trifles,' with which 'the law is not concerned.'"[46] Some U.S. jurisdictions also recognize "inherent impossibility" as a defense to criminal attempts, which applies to "situation[s] in which the defendant employs means which a reasonable [person] would view as totally inappropriate to the objective sought."[47] None of these legal principles are clear, and courts usually have broad discretion to the extent to functionally substitute the prosecutor, even the legislature.[48]

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41. *Id.* § 2.12. Section 2.12(1) addresses situations "akin to the defense of consent," which is not relevant here. MODEL PENAL CODE AND COMMENTARIES § 2.12 cmt. 2, at 402 (AM. L. INST. 1985).

42. Even drafters of the MPC agree that § 2.12 can be a rather vague instruction to courts. *See* MODEL PENAL CODE AND COMMENTARIES § 2.12 cmt. 2, at 404 (AM. L. INST. 1985) ("[T]hese provisions reflect an attempt to grant power to the courts in terms that will permit the principled growth of the law in an area where ad hoc judgments have prevailed.").

43. MODEL PENAL CODE § 5.05(2) (AM. L. INST. 1985). Under this provision, courts can, but is not required to, "enter judgment and impose sentence for a crime of lower grade or degree or, in extreme cases, may dismiss the prosecution." Although the provision states that "the Court *shall* exercise its power under Section 6.12" (emphasis added), § 6.12, again, grants courts the discretional right to lower the sentence to a lesser degree if courts are "of the view that it would be unduly harsh to sentence the offender in accordance with the Code." *Id.* § 6.12.

44. MODEL PENAL CODE AND COMMENTARIES § 5.05 cmt. 3, at 490 (AM. L. INST. 1985).

45. MODEL PENAL CODE § 6.12 (AM. L. INST. 1985)

46. Commonwealth v. Johnson, 167 A. 344, 348 (Pa. 1933) (Maxey, J., dissenting).

47. WAYNE R. LAFAVE, CRIMINAL LAW 800 (6th ed. 2017).

48. *See* Wesley MacNeil Oliver & Rishi Batra, *Standards of Legitimacy in Criminal Negotiations*, 20 HARV. NEGOT. L. REV. 61, 89–90 (2015) ("The vague language of the *de minimis* statute has left courts to consider this wide variety of factors, which certainly do not form the sort of legal test that a court typically considers outside the context of sentencing. Instead, these are

The incorporation of § 2.12 (and § 5.05(2) for criminal attempts) shows that epistemic justification for knowledge was indirectly factored into the MPC, as criminal conduct performed under an unjustified true belief is not necessarily criminalized if it is "de minimis." The application of these de minimis provisions in "unjustified true belief" cases leads to an absurd legal conclusion that "the agent 'knew' he traded stolen goods, but we chose not to convict." It is not difficult to conclude that such muddled, discretional, and post-determination-remedial cure for "unjustified true beliefs" can be replaced by more straightforward, systematic, and theoretically coherent legal reasoning if criminal law could incorporate the concept of "justification" directly into the term "knowledge."

D. Justified False Beliefs

Unlike the justification condition, the truth condition is almost explicitly waived from knowledge in criminal law. In other words, a "justified *false* belief" can be, and perhaps should be, sufficient for criminal knowledge. By incorporating languages such as "practically certain"[49] and awareness of "a high probability"[50] in § 2.02(2)(b), drafters of the MPC were consciously aware that a justified belief may turn out to be false occurrences unexpected by the perpetrator. Since at least one purpose of criminal law is to deter and punish socially harmful conduct accompanied by "vicious wills,"[51] culpabilities are normally allocated to actions under justified false beliefs the same way as those under justified true beliefs.

Therefore, the relevancy of whether a perpetrator's subjective belief turns out to be true is limited for the purpose of criminal convictions. To an extent, the truth condition only matters when it is being *negated*. In particular, § 2.04, i.e., "Ignorance or Mistake," states that a mistake of fact is a defense if it "negatives the purpose, knowledge, belief, recklessness or negligence required to establish a material element of the offense,"[52] although "the defense is not available if the defendant would be guilty of another offense had the situation been as he supposed."[53] Thus, if the agent acts under a justified false belief of the fact that his conduct would *not* cause a violation, or if he is *unaware* of the fact that his conduct would constitute a criminal offense due to insufficient factual knowledge, he is free of culpability unless he possesses some otherwise culpable mental states under § 2.02(2) such as recklessness or when strict

precisely the sort of factors that prosecutors consider in deciding whether to bring charges, how serious the charges should be, and what sort of plea bargain to offer." (citation omitted)). *But see* MODEL PENAL CODE AND COMMENTARIES § 5.05 cmt. 3, at 491 (AM. L. INST. 1985) ("The institute believed . . . that the judgments demanded by the section are sufficiently subordinate to declared legislative purpose, and sufficiently like other judgments that courts are routinely called upon to make, to fall properly within the competence and function of the courts.").

49. MODEL PENAL CODE § 2.02(2)(b)(ii) (AM. L. INST. 1985).

50. *Id.* § 2.02(7).

51. Ruan v. United States, 142 S. Ct. 2370, 2376 (2022).

52. MODEL PENAL CODE § 2.04(1)(a) (AM. L. INST. 1985).

53. *Id.* § 2.04(2).

liabilities apply to the particular offense. Therefore, § 2.04 purposely excludes the truth condition from criminal knowledge by reversing the relationship between truth and epistemic knowledge—while truth is a necessary condition to epistemic knowledge, in the MPC the negation of truthfulness as to the fact only matters when criminal knowledge is lacking in the first place.

Consequently, § 2.04 creates a parallel scenario that, if the agent, acting under a justified belief that his conduct, if successfully perpetrated, *would* constitute a violation but nevertheless failed to consummate the offense (hence, the belief failed to be true), his mistake would not negate "knowledge" under § 2.02(2), as he was nonetheless "aware" of the nature of his conduct or "practically certain" about its result. For instance, assume that the car dealer in the preceding subsection made a justified and accurate determination that he purchased a SUV far under its fair market value. He then reasonably speculated that the SUV was stolen but nonetheless decided to resell it for profit. Assume further that, this time, the SUV was *not* stolen; its seller simply thought that the dealer was a likable person and was willing to suffer a loss. Even if this was the case, the dealer may nonetheless be condemned under § 223.6 because the dealer received property with an imputed knowledge that it was stolen.[54] In other words, as criminal knowledge requires only "awareness of high probability," as opposed to epistemic knowledge, such fictional knowledge is not necessarily negated by falsehood.

To add some further complications, a criminal conduct that failed to consummate the criminal objective may nonetheless constitute a criminal attempt under § 5.01(1), which states that:

> Definition of Attempt. A person is guilty of an attempt to commit a crime if, acting with the kind of culpability otherwise required for commission of the crime, he:
>
> (a) purposely engages in conduct that would constitute the crime if the attendant circumstances were as he believes them to be; or
>
> (b) when causing a particular result is an element of the crime, does or omits to do anything with the purpose of causing or with the belief that it will cause such result without further conduct on his part . . . .[55]

Although "purposely" is the general requirement for criminal attempts, §§ 5.01(1)(a)–(b) creates two carveouts: (1) if knowledge regarding the attendant circumstance is an element of a crime, belief in the attendant

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54. *Id.* § 223.6 ("A person is guilty of theft if he purposely receives, retains, or disposes of movable property of another *knowing that it has been stolen*, or *believing that it has probably been stolen*, unless the property is received, retained, or disposed with purpose to restore it to the owner. . . . The requisite knowledge or belief is *presumed* in the case of a dealer who: . . . being a *dealer* in property of the sort received, acquires it for a consideration which he knows is *far below its reasonable value*. "Dealer" means a person in the business of buying or selling goods including a pawnbroker." (emphasis added)).

55. *Id.* §§ 5.01(1)(a)–(b). For the purpose of this Note, § 5.01(1)(c) on "substantial step" is irrelevant and is omitted accordingly.

circumstance alone is sufficient for culpability;[56] (2) for result crimes, if purpose is not required in the substantive crime, a "belief that it will cause such result" is sufficient for a criminal attempt it the action is consummated.[57] Hence, even if knowledge of an attendant circumstance is not an element of the alleged offense, if the agent holds a "vicious" justified false belief that amounts to a mental state similar to criminal knowledge, he may nonetheless be charged for criminal attempts based such a belief in combination with a failed truth condition.

Hence, the relevancy of "truth" as condition of criminal knowledge must be analyzed under three different circumstances. Firstly, if the agent possesses no "vicious will" but it accidentally turns out that his conduct suffices all elements of an offense, the falsehood of his belief would negate his culpability, and the truth condition matters here to the extent that it negates the agent's awareness of the nature or the result of his conduct due to the ignorance of pertinent facts. Secondly, if the agent has a "vicious will" to perpetrate a criminal offense and his conduct suffices all elements of an offense notwithstanding a falsehood in his belief, whether his belief turned out to be true may become irrelevant so long as all elements in the alleged offense are met, as in the car dealer's case. The lack of truth condition does not negate criminal knowledge in such cases. Lastly, if the agent has a "vicious will" to conduct an offense under the criminal law but he failed to suffice all elements of the offense due to the mistake, the truth of this belief negates the substantive offense almost by definition but is irrelevant to the analysis of his criminal attempt. Consequently, the truth condition matters at least in what defense the defendant could invoke: if the truth would negate the agent's awareness of an attendant circumstance or the likelihood of the result that are elements of some offenses, § 2.04 would be the most straightforward and forceful defense; if the agent is charged with criminal attempts regardless of his mistake, he would be able to invoke § 5.05(2) to mitigate the grading or seek dismissal of his offense (though less promising than § 2.04);[58] if, on the contrary, the agent is charged with the substantive crime, in some novel situations (such as that of the car dealer), his only hope would be the vague and discretionary § 2.12.

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56. *See* MODEL PENAL CODE AND COMMENTARIES § 5.01 cmt. 2, at 301 (AM. L. INST. 1985) ("The requirement of purpose extends to the conduct of the actor and to the results that his conduct causes, but his purpose need not encompass all of the circumstances included in the formal definition of the substantive offense.").

57. *See id.* at 305 ("If, for example, the actor's purpose were to demolish a building and, knowing that persons were in the building and that they would be killed by the explosion, he nevertheless detonated a bomb that turned out to be defective, he could be prosecuted for attempted murder even though it was no part of his purpose that inhabitants of the building would be killed.").

58. *See* MODEL PENAL CODE § 5.05(2) (AM. L. INST. 1985) ("If the particular conduct charged to constitute a criminal attempt, solicitation or conspiracy is so inherently unlikely to result or culminate in the commission of a crime that neither such conduct nor the actor presents a public danger warranting the grading of such offense . . . the Court . . . [,] in extreme cases, may dismiss the prosecution.").

E. Summary

The preceding discussion shows that the traditional JTB epistemological model is relevant to criminal law in at least three ways. Firstly, both criminal knowledge and epistemic knowledge presuppose the agent's belief; under either context, it would be logically inconsistent for someone to "know" *P* without believing in *P*. Secondly, although on the surface one could be said to possess criminal knowledge of *P* without a proper justification, the MPC provides a remedy for those situations under "De Minimis Infractions," which in turn suggests that justification is, and perhaps should be, relevant in determining culpability. Lastly, it seems to be the drafters' intention to assign culpability to justified *false* beliefs, but the truth condition is relevant to the extent that (1) its negation also cancels the defendant's awareness of substantial likelihood or (2) it affects the nature of the charges against the defendant, especially in distinguishing between substantive crimes and their corresponding criminal attempts. Although § 2.12, § 5.05(2), and § 6.12 mitigate novel cases that could result in counterintuitive convictions, they are either discretionary or limited in scope.

I. GETTIER CASES IN CRIMINAL LAW: VERITIC EPISTEMIC LUCK AND *MENS REA*

The previous section shows the relationship between the traditional JTB model and knowledge as defined in the MPC. However, after Gettier's paper, even the traditional JTB model is no longer sufficient for knowledge.[59] Without attempting to resolve the epistemological question of what knowledge *per se* is, this section explores the implication of Gettier cases to *mens rea* under criminal laws, particularly the MPC. The "stopped clock" case in the preceding section demonstrates an instance of what Engel and Pritchard called "veritic epistemic luck," i.e., the agent's belief turned out to be true merely as a matter of luck.[60] The agent does not merely come to know *P* as a matter of luck,[61] nor is the agent luckily been placed in an evidential situation that allows him to know *P*;[62] the agent merely has a belief of *P* with some supposedly proper justifications that turns out to be ill-connected with the fact that *P*. The purpose of this section is to show there is a potential inconsistency between the legal conclusion to veritic epistemic luck cases and the underlying logic behind the MPC's grading

59. *See* Gettier, *supra* note 7, at 123.

60. *See* Engel, *supra* note 23, at 67; *see also* DUNCAN PRITCHARD, EPISTEMIC LUCK 146 (2005).

61. This would be what Pritchard and Unger called "content epistemic luck." *See* PRITCHARD, *supra* note 60, at 133–34; *see also* Peter Unger, *An Analysis of Factual Knowledge*, 65 J. PHIL. 157, 159 (1968). Both authors agree that such epistemic luck is irrelevant to the question of whether the agent possesses the relevant knowledge.

62. This would be what Pritchard and Engel called "evidential epistemic luck." *See* PRITCHARD, *supra* note 60, at 136–37; *see also* Engel, *supra* note 23, at 67. Both authors agree that such epistemic luck is irrelevant to the question of whether the agent possesses the relevant knowledge.

mechanism, i.e., culpability should be roughly proportionate to the degree of subjective certainty regarding the nature of or the harm that would cause by the conduct.[63] This section introduces and analyses two types of veritic epistemic luck cases under a criminal context: "double ignorance" and "illusory confidence."

A. Veritic Epistemic Luck: Cases of "Double Ignorance"

Due to the novelty of Gettier cases, it is appropriate to use two hypotheticals to illustrate the legal difficulty resulting from the failure to distinguish between the two concepts. The first case demonstrates the situation of "double ignorance." In this type of fact pattern, the agent thinks that he knows or is practically certain about *P*, has proper justifications for the belief of *P*, and *P* turned out to be true. Meanwhile, the agent's belief in *P*, although justified, is inherently ill-founded (the first ignorance), and what actually caused *P* to be true is completely unknown to the agent (the second ignorance). In other words, the agent's belief that *P* was true and the fact that *P* was true were coincidental. The following is an illustration of "double ignorance" in the context of criminal law:

> Albert was not an expert of radioactive materials.[64] With an urgent need for money, he planned to sneak into a local nuclear waste disposal station, secretly seize some nuclear flasks (i.e., waste containers), and sell them at a black market. Albert generally knew that release of radioactive materials could be dangerous, but he did not really mind that happening. Before perpetrating his plan, Albert reviewed online articles and watched videos (assuming that they were reliable sources) that fully informed him of the danger of removing the top lid from nuclear flasks. He was practically certain that removing the top lid almost guaranteed the release of harmful materials. Albert successfully sneaked into a nuclear disposal facility, carried away several nuclear flasks, and brought them to the potential buyer. When the two met, the buyer instructed Albert to remove the top lid, and Albert complied regardless of the known danger. Unknown to Albert, however, the nuclear flasks he stole were manufactured under a new design with multi-layered protections, and the mere removal of the top lid would generally be safe. Nonetheless, also unknown to Albert, one of the flasks he stole was defective—as an improbable coincidence, all the inner layers

63. *See* MODEL PENAL CODE AND COMMENTARIES § 2.02 cmt. 3, at 236 (AM. L. INST. 1985) ("[Recklessness] resembles acting knowingly in that a state of awareness is involved, but the awareness is of risk, that is a probability less than substantial certainty"); Kenneth W. Simons, *Statistical Knowledge Deconstructed*, 92 B.U. L. REV. 1, 15–16 (2012) ("*Cognitive* mental states are especially apt means for achieving [criminal law's] grading function, because beliefs are scalar . . . . Thus, acting with knowledge is often more culpable than acting with the 'lower' belief of cognitive recklessness.").

64. This logic behind this case is similar to Case I in Professor Gettier's paper. *See* Gettier, *supra* note 7, at 122; *see also* CHISHOLM, *supra* note 6, at 93.

> were apertured, and the outmost layer was the only protection against the release. "Knowing" the danger of removing the top lid, Albert soon left the city and remained safe and intact. The release of nuclear waste subsequently caused severe local health and property damages. After the camera recording from the disposal station was discovered, the local prosecutor charged Albert, *inter alia*, with "Causing Risk or Catastrophe" under MPC § 220.2.(1). The article states:
>
> A person who causes a catastrophe by explosion, fire, flood, avalanche, collapse of building, release of poison gas, *radioactive material* or other harmful or destructive force or substance, or by any other means of causing potentially widespread injury or damage, commits a felony of the second degree if he does so purposely or *knowingly*, or a felony of the third degree if he does so recklessly. [65]

Under MPC § 2.02(2)(a), Albert's culpability did not amount to "purposely" because the release of radioactive material was not a "conscious object" of his conduct—larceny and burglary were.[66] However, by MPC § 2.02(2)(b)(ii)'s standard, Albert's conduct would almost certainly imply a criminal knowledge. As a result of his learning, Albert was clearly *aware* of the consequence of opening nuclear waste containers, and he was *practically certain* about the danger of his conduct.[67] If "awareness" is the standard for "knowingly," Albert was clearly culpable of "knowingly" causing the release of radioactive materials. Nonetheless, outside of a legal context, it is at least counterintuitive to assert that Albert "knew" that opening the containers would cause a catastrophic release. Of course, Albert had a belief about the release, which turned out to be true. Albert even had proper and reliable justifications for his belief, as all reliable sources informed him about the danger. Still, Albert's justified belief came to be true merely due to an accident, and the actual cause of the release was unknown to him.

What caused the discrepancy between the legal and epistemic conclusion regarding Albert's knowledge? A peculiar feature of Albert's case is that it challenges one of the basic assumptions set under MPC's *mens rea* requirements. By defining knowledge in result crimes as awareness of practical certainty and recklessness as conscious disregard of "a substantial and unjustifiable risk,"[68] a fair assumption is that MPC's drafters intended to roughly proportionate culpability with certainty,[69] which makes sense intuitively—the more certain one is about the adverse consequence of his conduct, the more culpable he should be in perpetrating that conduct.[70] In this

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65. MODEL PENAL CODE § 220.2(1) (AM. L. INST. 1985) (emphasis added).

66. *See id.* § 2.02(2)(a) (AM. L. INST. 1985). For burglary and theft, see *id.* §§ 221.1, 223.2.

67. *See id.* § 2.02(2)(b)(ii) (emphasis added).

68. *Id.* § 2.02(2)(c).

69. *See* MODEL PENAL CODE AND COMMENTARIES § 2.02 cmt. 3, at 236 (AM. L. INST. 1985).

70. *See* Simons, *supra* note 63, 15–16.

case, however, had Albert acquired more accurate factual information regarding the nuclear flask, had Albert conducted more careful research that could inform him of the new design, or had Albert achieved a higher degree of objective certainty about what is likely to happen by removing the top lid, he would appear to be *less* culpable than he was in the hypothetical case, perhaps not even culpable at all. Under § 2.02(2), even the "lowest" *mens rea* requirement, i.e., negligence, requires an objective determination of awareness of "substantial and unjustifiable risk."[71] Hence, if no reasonable person, after careful research and sufficient luck to find out information about the new design used in this particular disposal station, would believe that the mere removal of the top lid can be dangerous (which is also true in the hypothetical), Albert would be free of any criminal culpability (additionally, Albert can invoke § 2.04 "Ignorance or Mistake" as a defense, as ignorance here would negate his *mens rea*).

Accordingly, Albert's case has three possible scenarios under § 2.02(2)(b)'s framework. Assuming in each scenario, Albert ultimately removed the top lid: if Albert were omniscient regarding every detailed fact, including the flask's inner breach, he would be determined to have acted "knowingly;" if Albert conducted thorough research and learned about the multi-layered design but not the particular defect, he would *not* be culpable for his conduct; finally, if Albert undertook some level of research and formed an accidentally true belief regarding the danger of his conduct, his conduct would be, again, a "knowingly" one. In these scenarios, *degrees of certainty* are in descending order. It makes little normative sense to raise the *degree of culpability* between the second and the third scenarios, especially under the assumption that culpability is roughly proportionate to the degree of certainty.[72] In other words, if Albert is free of culpability under the second scenario, he should also be free of culpability in the last scenario, the one in the original hypothetical; if Albert is culpable in the last or the original scenario, he should also be culpable, if not more, in the second scenario.

Ultimately, the inconsistency can be traced back to the distinction between knowledge and awareness discussed in Section II. Epistemically speaking, Albert had no knowledge regarding the release, regardless of whether he learned about the multi-layered design. If he learned about the multi-layered design and believed in the safeness of his conduct, he lacked knowledge regarding the result of his conduct due to a failed T condition; if he was unfamiliar with the new design and believed in the danger associated with the removal, he was "Gettiered." Nonetheless, what Albert was "aware of" between the two scenarios are different: in the former, he was aware of the safety of his conduct; in the latter, the danger of it. However, if criminal knowledge is completely independent of epistemic knowledge but merely based on the awareness of the danger, the traditional distinction between "knowledge" and "recklessness" would become meaningless. Though some scholars argue that knowledge and

71. MODEL PENAL CODE § 2.02(2)(d) (AM. L. INST. 1985).

72. *See* MODEL PENAL CODE AND COMMENTARIES § 2.02 cmt. 3, at 236 (AM. L. INST. 1985).

recklessness differ only in the degree of subjective certainty of the risk,[73] others endorse a more fundamental difference.[74] In any case, "double ignorance" situations, at the very least, suggest that a higher degree of theoretical coherency can be achieved by either redefining knowledge independently from awareness, or by reducing knowledge to recklessness altogether.[75]

B. Veritic Epistemic Luck: Cases of "Illusory Confidence"

The second variant of veritic epistemic is "illusory confidence." In a "double ignorance" scenario, the agent lacks knowledge due to perhaps adequate but inherently mistaken justification, and the agent holds a supposedly false belief that turned accidentally to be true. By comparison, in an "illusory confidence" scenario, the agent's justification is insufficient but not implicitly mistaken as in double ignorance cases. In cases of "illusory confidence," the *propriety* of the agent's justification for her belief results from an accident caused by external circumstances. In other words, unlike "double ignorance," in which the agent's internal mental process relating to the fact is defective, the agent in an "illusory confidence" scenario has the proper mental process but lacks the contextual knowledge that, if known, would weaken the confidence of her belief, without being mistaken. The following illustrates a situation of "illusory confidence" in the context of criminal law:

> Betty was a gifted painter who was completely ignorant of art history.[76] She could perfectly duplicate any ancient painting, and most experts could not distinguish her replica from the original work by their appearance. Betty's talent was soon discovered, and an unknown art dealer solicited her to make copies of Leonardo da Vinci's paintings. The dealer sent her detailed photocopies of three paintings allegedly from Leonardo da Vinci and promised Betty to pay her one million dollars if she could make a perfect copy of any of them. Unheard of the Italian artist's name, Betty believed that all three pictures were accurate depictions of da Vinci's artworks, and the lucrative payment convinced her that the original works must be valuable. As the payment was the same regardless of which piece she copied, Betty chose the smallest one from the three artworks. The piece she copied was, in fact, a picture of da Vinci's original work. However, the other two were pictures of well-known forgeries

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73. *See, e.g.*, Sarch, *supra* note 20, at 17 ("Recklessness, then, differs from knowledge mainly in that it does not require having as high a degree of confidence that the relevant material element obtains . . . .").

74. *See, e.g.*, Macleod, *supra* note 31, at 535–36 (distinguishing knowledge from recklessness by arguing that knowledge is an "'invariant' and 'purely descriptive' mental state," whereas recklessness is "'variant' and 'evaluative'"); Charlow, *supra* note 34, at 1380–82 (arguing knowledge and recklessness are distinguished with five aspects).

75. For the latter approach, see, e.g., LARRY ALEXANDER & KIMBERLY KESSLER FERZAN, CRIME AND CULPABILITY: A THEORY OF CRIMINAL LAW 32–33 (2009).

76. The logic behind this case is similar to Goldman's "fake barn" case. *See* Goldman, *supra* note 9, at 772–73.

> of da Vinci from two different eras. Any art student would know that a copy of neither painting could fool any buyer with an ordinary level of knowledge in art history. After Betty was caught, the prosecutor charged her with "Simulating Objects of Antiquity, Rarity, Etc." as defined in MPC § 224.2. The article states:
>
> A person commits a misdemeanor if, with purpose to defraud anyone or *with knowledge that* he is facilitating a fraud to be perpetrated by anyone, he makes, alters or utters any object so that it appears to have value because of antiquity, rarity, source, or authorship which it does not possess.[77]

From a legal perspective, Betty's case is distinguished from Albert's as she was charged with a conduct crime where causation is not an element of the offense. Hence, the proximate cause, discussed later in this section, would not help Betty in defending her case. Betty's offense also included an attendant circumstance requiring "knowledge" as an element of the offense. When "knowledge of the existence of a particular fact is an element of an offense," MPC § 2.02(7) requires Betty to possess an awareness of a "high probability" of the likelihood that she was facilitating fraud.[78] Comparing to Albert's case that is based on a "practically certain" standard, "knowledge" under § 2.02(7) may appear to be a broader one under a literal reading. Nonetheless, drafters explained that the language was changed from a "substantial probability" to a "high probability" precisely to strengthen the level of confidence required to sufficiently distinguish knowledge and recklessness.[79] This section assumes that "high probability" is equivalent to "practical certainty."[80]

Nonetheless, the most crucial distinction between the two cases is epistemic. In Albert's case, two propositions were unknown to him: (1) the existence of the new design that almost always prevents the release caused by the mere removal of the top lid and (2) the improbable breach of all inner layers in a multi-layered flask. The first proposition negates his belief, but the conjunction with the second proposition restores the truthfulness of his belief. Conversely, there was only one unknown proposition to Betty: two out of three paintings were forgeries. Betty's unknown proposition would not negate her belief that she was facilitating a fraud but only weakens it.

The first legal implication arising from the subtle epistemic distinction is that had Betty known that only one of the three pictures was a picture of a valuable painting from da Vinci and chose without knowing exactly which one it was, and had she copied the only valuable one by chance, her *mens rea* would technically be recklessness, as a smaller than fifty percent chance usually does

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77. MODEL PENAL CODE § 224.2 (AM. L. INST. 1985) (emphasis added).

78. *Id*. § 2.02(7).

79. *See* MODEL PENAL CODE AND COMMENTARIES § 2.02 cmt. 9, at 248 n.42 (AM. L. INST. 1985).

80. *See also* Global-Tech Appliances, Inc. v. SEB S.A., 563 U.S. 754, 774 (2011) (Kennedy J. dissenting) ("The majority's decision . . . appears to depend on the unstated premise that knowledge requires certainty, but the law often permits probabilistic judgments to count as knowledge.").

not qualify as a "high probability" required by "knowingly."[81] Hence, in "double ignorance" cases, if the first "ignorance" becomes known, the agent would be immune from criminal culpability; in "illusory confidence" cases, if the probabilistic nature of the fact becomes known, and if the probability of the risk is "substantial" (while not "high" or "certain")[82] but smaller than fifty percent, the culpability would be lower than knowledge, yet still present. Therefore, like Albert's case, had Betty obtained a higher *degree of certainty*, she would have a lower *degree of culpability*,[83] and this would again imply the inconsistency between the underlying assumption of the proportionality between certainty and culpability and the actual result of defining knowledge by awareness under § 2.02(2)(b).[84]

Another implication concerns criminal attempts. In this case, Betty was more likely than not (i.e., two-thirds of a chance) to copy a worthless forgery. Had she copied a worthless painting by chance, with or without the knowledge of the fact that only one picture is that of an actually valuable painting, her conduct would fail to qualify as making an object "so that it appears to have value . . . because of antiquity, rarity, source, or authorship which it does not possess."[85] However, whether she acted with or without the knowledge that she only had a third of a chance to copy the valuable painting would affect her charge in a bizarre way. Without such knowledge, Betty is less epistemically knowledgeable regarding the attendant circumstance, but she could be charged with a criminal attempt based on "knowledge." In this case, Betty would be more confident in believing that she was facilitating a fraud that's going to be perpetrated by the dealer, so that she "purposely engages in conduct that would constitute the crime if the attendant circumstances were as [she] believes them to be."[86] In contrast, if she actually knew that two out of the three paintings were not valuable, she would be less confident about her belief. Conscious of a third of a chance that her conduct would be illegal is ordinarily sufficient for "recklessness," but recklessness is insufficient for § 224.2, which requires

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81. *See* Macleod, *supra* note 31, at 507 ("[a] point of agreement among commentators is that, whatever this certainty level [of knowledge] is, it is above fifty percent, and probably considerably higher than fifty percent."). However, in cases involving willful ignorance, some commentators argued that a lower than fifty percent probability might suffice MPC's "high probability" standard. *See, e.g.*, Douglas N. Husak & Craig A. Callender, *Wilful Ignorance, Knowledge, and the "Equal Culpability" Thesis: A Study of the Deeper Significance of the Principle of Legality*, 1994 WIS. L. REV. 29, 38 (1994).

82. MODEL PENAL CODE §§ 2.02(2)(b)–(c) (AM. L. INST. 1985).

83. Note that the requisite *mens rea* in § 224.2 is "purpose" or "knowledge." According to MPC § 2.02(4), purpose or knowledge "shall apply to all the material elements of the offense," so Betty cannot be charged for the substantive crime or criminal attempt under § 224.2 if her culpability was "recklessness." *Id.* § 2.02(4). However, whether Betty can be charged under § 224.2 does not affect the analysis of her *mens rea*.

84. *See* MODEL PENAL CODE AND COMMENTARIES § 2.02 cmt. 3, at 236 (AM. L. INST. 1985).

85. MODEL PENAL CODE § 224.2 (AM. L. INST. 1985).

86. *See id.* § 5.01(1)(a).

purpose or knowledge.[87] Comparing between the two scenarios, Betty could be charged for a criminal attempt due to a *lack* of knowledge regarding the circumstance but can be immune from the charge due to *increased* knowledge. Consequently, in Betty's case, the similar problem for substantive crimes described in the preceding paragraph is transplanted to criminal attempts.

Lastly, Albert and Betty's mental states are both subjectively and epistemically similar: subjectively, both had a practical certainty in their belief sufficient for "knowledge" as defined in the MPC; epistemically, both of them were "Gettiered;" i.e., possessing a justified true belief but without knowledge. However, had the fact turned out to be the opposite merely as a matter of luck unknown to them, i.e., the multi-layered nuclear flask was not breached, and Betty luckily chose to copy a forgery, Albert's case is going to be dismissed, but Betty would be charged for a criminal attempt. Indeed, what was lurking behind Albert's case was accidental, but what was behind Betty's case was probabilistic. Still, if mental culpability is so essential to the determination of crimes,[88] different treatments to identical mental states can be, at least, inconsistent with the Code's purpose.[89]

C. Alternative Legal Solutions

It is not the purpose of this paper to make a normative argument that Albert or Betty should or should not be convicted and under what charges. The two hypotheticals from the preceding subsections merely show that the current definition of knowledge under the MPC could condemn those who acted without *de facto* knowledge as acting "knowingly," which could lead to some theoretical incoherencies within the MPC. An existing incoherency within a statute does not necessarily lead to the possibility of normatively wrongful convictions,[90] and even if it does, it is not always the business of law to comply with every mainstream normative judgment.[91] It shows only an instance in which legal technicalities departed from the ordinary meaning of a term and may potentially fail to achieve its purpose on a very narrow ground. Still, as culpability is obviously related to the legal conclusion, it is helpful to discuss some legal remedies that may cure the counterintuitive result. As results matter the most to Albert and Betty, if any alternative legal theories could exculpate

87. *See supra* note 78. *See also* MODEL PENAL CODE § 2.02(4) (AM. L. INST. 1985).

88. *See* MODEL PENAL CODE AND COMMENTARIES § 2.02 cmt. 1 at 229 (AM. L. INST. 1985) ("[T]he Code's basic requirement [is] that unless some mental culpability is proved with respect to each material element of the offense, no valid criminal conviction may be obtained.").

89. *See also* Johnson, *supra* note 35, at 582 ("[T]he criminal law [should] not resort to purely *subjective* probabilities—to the actor's own elusive 'beliefs about the probabilities of outcomes'—as a basis for defining and grading risk-based offenses." (citation omitted)).

90. *See, e.g.*, Lynn Adelman, *Federal Habeas Review of State Court Convictions: Incoherent Law but an Essential Right*, 64 ME. L. REV. 379, 386 (2012) ("Although it would be wonderful if Congress or the Supreme Court would make federal habeas review more coherent and less unfair than it presently is, our focus in the meantime should be on preserving it and making it work as well as possible.").

91. *See, e.g.*, Bennis v. Michigan, 516 U.S. 442, 454 (1996) (Thomas J., concurring) ("[T]he Federal Constitution does not prohibit everything that is intensely undesirable.").

them from their cases, the discrepancy between the meanings of the two terms could be less problematic in a result-oriented realm.

Under the MPC, three potential cures are relevant to Albert and Betty's cases. Firstly, though the MPC did not adopt the language of "proximate cause," § 2.03(2) may exculpate conduct perpetrated "knowingly" but with a result beyond the perpetrator's contemplation.[92] This applies only to Albert's case, as causation is not an element in Betty's conduct crime. Secondly, as mentioned before, both Albert and Betty may have defenses under § 2.04(1) on the ground that they were *de facto* ignorant while perpetrating their alleged conduct.[93] Lastly, courts may dismiss Albert and Betty's cases under MPC § 2.12(3) "De Minimis Infractions."[94] However, this Note finds that none of these defenses would help Albert Betty with their cases, nor would they help define their culpability properly, because all these cures ultimately turn back to the problem of *mens rea* itself under the way MPC was structured. In other words, whether any cure to the dilemma caused by the problematic formulation of knowledge is effective eventually depends on the way knowledge is defined, and hence any legal analysis of these defenses is inevitably circular.

1. Proximate Cause

In Albert's case, perhaps the most uncomforting element in his likely conviction is that although his conduct is a but-for cause of the catastrophe, the catastrophe happened in a fundamentally different manner from what he believed. For this defense, although the MPC does not inherit the traditional language of "proximate cause," it nonetheless states:

> When purposely or knowingly causing a particular result is an element of an offense, the element is not established if the actual result is not within the purpose or the contemplation of the actor unless:
>
> . . . .
>
> (b) the actual result involves the same kind of injury or harm as that designed or contemplated and is not too remote or accidental in its occurrence to have a [just] bearing on the actor's liability or on the gravity of his offense.[95]

In Albert's case, the actual result of the release was in Albert's contemplation, as he justifiably believed that the opening would cause the release. Therefore, a literal reading of the statute would not help Albert with his case, and his reliance on § 2.03(2) is likely to be dismissed in the pleading stage. Even if Albert successfully contended that the *manner* of the result was *not* within his contemplation, he nonetheless needed to show that the release of nuclear wastes is "too remote or accidental" relating to his conduct. Unfortunately, drafters of the Code did not bring clarity to what at all "remote"

92. *See* MODEL PENAL CODE § 2.03(2) (AM. L. INST. 1985).

93. *See id.* § 2.04(1)(a).

94. *See id.* § 2.12(3).

95. *Id.* § 2.03(2)(b).

and "accidental" mean, nor did they intend to.[96] In interpreting this code provision, the Supreme Court of New Jersey, for example, has ultimate resorted to "a sense of justice."[97] In Albert's case, although it can be said that the result is epistemically remote from his conduct, the fact that he acted with a practically certain belief that his conduct would cause a catastrophe significantly weighs against him. Determined from both the drafter's language[98] and case law,[99] proximate causation under the MPC is unlikely to be in Albert's favor because the Code would assign Albert's mental state with a high degree of culpability in the first place, regardless of the manner of how the result came about.

2. Ignorance & Mistake of Fact

Without analyzing under the context of legal fiction on "ignorance" and "mistake," both Albert and Betty were ignorant about the nature of their conduct regardless of having justified true beliefs about them. Albert made a wrong determination that removing the top lid from the nuclear flask was likely to be dangerous, and Betty was mistaken in believing that all three pictures were valuable paintings from Leonardo da Vinci. However, as discussed in Section II, the type of mistake they made is unlikely to affect the court's decision. In both cases, the defendant's culpability would be knowledge. If defendants were omniscient in every material fact regarding their offenses (i.e., Albert knows both the new design and the breach, and Betty knows both the chances of copying a forgery and that she happened to choose the actual painting of da Vinci), their culpability would still be knowledge, regardless of the absence of epistemic knowledge. Hence, their ignorance or mistake does not negate their culpability,[100] nor can they reduce their culpability.[101]

3. De Minimis Infractions

De Minimis Infractions under § 2.12(3) (and § 5.05(2) for attempts) is perhaps the most promising cure for Albert and Betty. Section 2.12(3)'s language mandates the court to dismiss a case that "presents such other extenuations that it cannot reasonably be regarded as envisaged by the

96. *See* MODEL PENAL CODE AND COMMENTARIES § 2.03 cmt. 3, at 262 (AM. L. INST. 1985) ("[T]he infinite variety of contexts in which the issue can arise precludes and advance catalogue of premises that can be used mechanically to deduce a solution.").

97. *See* State v. Maldonado, 645 A.2d 1165, 1181 (N.J. 1994) (The court also states that "[i]n many, many other areas the law cannot be precise but must be practical. Even in the fashioning of rules of liability, this Court bluntly has acknowledged that its sense of sound policy and justice may be the ultimate touchstone.").

98. *See* MODEL PENAL CODE AND COMMENTARIES § 2.03 cmt. 2 at 259 (AM. L. INST. 1985) ("[W]hen the requirement of 'proximate causation' dissociates the actor's conduct from a result of which it is a but-for cause, the reason is always a judgment that the actor's culpability with respect to the result . . . is such that it would be unjust to permit the result to influence his liability or the gravity of his offense.").

99. *See* State v. Maldonado, 645 A.2d at 1182 (arguing that remoteness is connected to the ultimate culpability).

100. *See* MODEL PENAL CODE § 2.04(1)(a) (AM. L. INST. 1985).

101. *See id.* § 2.04(2).

legislature in forbidding the offense."[102] Indeed, it is likely that the court could find that legislators and drafters of the MPC could not have contemplated novel cases such as Albert's and Betty's. However, it is questionable whether their cases constitute "extenuations" regarding "the nature of the conduct charged to constitute an offense and the nature of the attendant circumstances"[103] and whether the court, by adopting a "rule of reason in the interpretation of the basic statute,"[104] could find Albert and Betty should be excused; the determination may ultimately goes to the jury.[105] Commentators are sometimes troubled by this provision's practical guidance and interpreting it as a "vehicle for developing new, judicially created defenses."[106] Further, in *State v. Kargar*, the Supreme Judicial Court of Maine, in interpreting a similar de minimis statute under Maine law,[107] found that an "*innocent state of mind*"[108] is relevant and perhaps dispositive to the *de minimis* analysis. Applying the court's interpretation, when Albert and Betty both clearly have culpable mental states as legally determined in the first place, § 2.12(3) is, again, unlikely to be in their favor.

D. Summary

This section shows that courts are likely to convict Gettier defendants as having "knowledge," notwithstanding the epistemic reality of the absence of knowledge. Moreover, in Gettier cases, the logic behind the MPC's grading scheme that the degree of confidence should be proportionate to the degree of culpability fails. Between different types of Gettier cases, even when the agents possess identical knowledge states, courts, if strictly applying the MPC's knowledge standard, may end up with contradictory determinations in their culpability (Albert would not be culpable if he failed, but Betty would be). Finally, Gettier defendants may not have an adequate legal defense to cure their novel cases because, under the MPC's formulation of them, all potential defenses ultimately resort back to their *men rea*, which is the very reason for

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102. *Id.* § 2.12(3).

103. *Id.* § 2.12 (preamble).

104. MODEL PENAL CODE AND COMMENTARIES § 2.12 cmt. 2 at 404 (AM. L. INST. 1985).

105. *See* Paul H. Robinson, *Why Does the Criminal Law Care What the Layperson Thinks Is Just? Coercive Versus Normative Crime Control*, 86 VA. L. REV. 1839, 1854 (2000) ("It is for the juror to decide what must have been 'reasonably envisaged' and what violations are generally tolerated.").

106. *See, e.g.*, Stanislaw Pomorski, *On Multiculturalism, Concepts of Crime, and the "De Minimis" Defense*, 1997 BYU L. REV. 51, 78 (1997) (Additionally, the author contends that "[t]his language gives virtually no guidance to the courts. The reference to a presumed legislative intent is entirely unhelpful rhetoric.").

107. *See* ME. REV. STAT. ANN. tit. 17-A, § 12 (West 2024) ("The court may dismiss a prosecution if, upon notice to or motion of the prosecutor and opportunity to be heard, having regard to the nature of the conduct alleged and the nature of the attendant circumstances, it finds the defendant's conduct: . . . [p]resents such other extenuations that it cannot reasonably be regarded as envisaged by the Legislature in defining the crime.").

108. State v. Kargar, 679 A.2d 81, 83 (Me. 1996) (emphasis added).

the contention. Again, this section is neutral on whether Albert and Betty should be convicted as a matter of morality, but it shows a coherent and consistent chain reasoning is lacking if Albert and Betty were ultimately convicted, as defenses to the problem regarding the definition knowledge ultimately comes back to how knowledge is defined in the first place.

CONCLUSION

This Note does not offer a solution to the problems caused by the lack of explicit requirement of JTB in MPC's definition of knowledge or the problems that could arise when an MPC jurisdiction attempts to adjudicate Gettier cases. At a fundamental level, the solution might be found in contemporary philosophy, and the richness of scholarly works from modern epistemology regarding Gettier cases could be a starting point for legislators and drafters of the MPC. Even if the truth condition is, and perhaps ought to be, disregarded in determining criminal defendants' culpability, other additional criteria to knowledge such as "justification" and other potential post-Gettier fourth conditions could be helpful in reformulating knowledge. Ultimately, one might ask, as a practical matter, whether criminal law is required to cure these nuanced problems that have almost no presence in reality. Indeed, the law, especially criminal law, can tolerate gray areas and leave work to the wisdom of the jury. However, if obtaining a higher degree of theoretical consistency within the law itself without sacrificing its current function is possible, there is no reason to protest it.