

# ON THEORETICAL AND PRACTICAL DOXASTIC ATTITUDES

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**ABSTRACT:** In the literature on doxastic attitudes, the notion 'belief' is used in both a coarse-grained and a fine-grained manner. While the coarse-grained notion of 'belief,' as the doxastic attitude that expresses any form of assent to its content, is a useful technical concept, the fine-grained notion, which tries to capture the folk notion of 'belief' in contrast with other doxastic concepts such as 'acceptance' or 'degrees of confidence,' is utterly ambiguous. In order to dispel this ambiguity, I introduce first a new framework for describing doxastic attitudes that does not rely on a specific fine-grained primitive notion of 'belief.' This framework distinguishes two different doxastic attitudes, i.e. the theoretical and the practical, and explains how various doxastic concepts such as 'accepting,' 'having a degree of confidence' and the folk notion of 'belief' all describe a particular interpretation of one or both of the distinguished doxastic attitudes. Next, by focusing on ongoing debates over the difference between 'acceptance' and 'belief' on the one hand and between 'degrees of confidence' and '(plain) belief' on the other, I argue that much precision can be gained in philosophical analysis by taking a reductionist stance concerning any specific fine-grained and primitive notion of 'belief.'

**KEYWORDS:** doxastic attitudes, belief, acceptance, degrees of confidence,  
degrees of belief

## 1. The Notion 'Doxastic Attitude'

The notion of a *doxastic attitude* entered the general epistemology literature in the late 1970s, especially via the works of Goldman,<sup>1</sup> who used it to describe in a generic way the propositional attitude of either *belief* or *disbelief*. Since the 1980s, the notion has become more widely used for this purpose, though one generally now adds a third option of *withholding belief* or *suspending judgment*.<sup>2</sup> In this way, doxastic attitudes have come to be understood as the three possible attitudes

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<sup>1</sup> See e.g. Alvin Goldman, "Epistemics: the Regulative Theory of Cognition," *The Journal of Philosophy* 75, 10 (1978): 515; Alvin Goldman, "Epistemology and the Psychology of Belief," *The Monist* 61, 4 (1978): 525; Alvin Goldman, "Varieties of Cognitive Appraisal," *Noûs* 13, 1 (1979): 23.

<sup>2</sup> See e.g. Richard Feldman and Earl Conee, "Evidentialism," *Philosophical Studies* 48, 1 (1985): 15; Ernest Sosa, *Knowledge in Perspective* (Cambridge: Cambridge University Press, 1991), 126; Matthias Steup, "Doxastic Freedom," *Synthese* 161, 3 (2008): 375.

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an agent can intellectually adopt towards a proposition after considering it, a view which has also been called *Triad*.<sup>3</sup>

As the notion 'doxastic attitude' gained currency, several authors started to also use it to describe a broader class of belief-like attitudes similar but not identical to the attitude of belief. From his Bayesian stance, Kaplan started this evolution by calling *degrees of confidence* – also often referred to as *degrees of belief* – doxastic attitudes.<sup>4</sup> The attitude of *acceptance*, which was introduced in the literature by Van Fraassen,<sup>5</sup> also generally came to be regarded as a doxastic attitude.<sup>6</sup> Kapitan called the attitudes of *presuming*, *feeling* and *taking for granted* lower-level doxastic attitudes: unlike 'belief,' these notions do not imply the agent's ability to articulate their content explicitly.<sup>7</sup> Williams even extended the idea further by calling *hypothesizing* and *suspecting* doxastic attitudes.<sup>8</sup>

Already in 1983, Searle argued for the need to consider these belief-like attitudes, for some purposes, as a single category, and grouped them under the label BEL, in contrast with desire-like attitudes, which he called DES.<sup>9</sup> Williams made the same distinction, but named his groups 'doxastic attitudes' and 'orectic attitudes'.<sup>10</sup> Leaving aside the question of whether all propositional attitudes can be reduced to (a combination of) elements of these two groups, it is commonly accepted in contemporary epistemology that 'belief' and 'desire' are two basic exemplars, each of them representative of and (for many purposes) interchangeable with a large group of similar propositional attitudes.<sup>11</sup> It is also common practice to call the group of belief-like attitudes 'doxastic attitudes'.<sup>12</sup>

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<sup>3</sup> John Turri, "A Puzzle about Withholding," *Philosophical Quarterly* 62, 247 (2012): 355.

<sup>4</sup> Mark Kaplan, "A Bayesian Theory of Rational Acceptance", *The Journal of Philosophy* 78, 6 (1981): 310.

<sup>5</sup> Bas Van Fraassen, *The Scientific Image* (Oxford: Oxford University Press, 1980), 4.

<sup>6</sup> Ruth Weintraub, "Decision-Theoretic Epistemology," *Synthese* 83, 1 (1990): 165.

<sup>7</sup> Tomis Kapitan, "Deliberation and the Presumption of Open Alternatives," *The Philosophical Quarterly* 36, 143 (1986): 235.

<sup>8</sup> S.G. Williams, "Belief, Desire and the Praxis of Reasoning," *Proceedings of the Aristotelian Society* 90 (1989): 124.

<sup>9</sup> John Searle, *Intentionality* (Cambridge: Cambridge University Press, 1983), 29-36.

<sup>10</sup> Williams, "Belief, Desire and the Praxis of Reasoning," 124.

<sup>11</sup> Graham Oppy, "Propositional Attitudes," in *Routledge Encyclopedia of Philosophy*, ed. E. Craig. (London: Routledge, 1998), <http://www.rep.routledge.com/article/V028SECT1>. Accessed July 14, 2014.

<sup>12</sup> Pascal Engel, "Trust and the Doxastic Family," *Philosophical Studies* 161, 1 (2012): 17; Alvin Goldman, "Why Social Epistemology is Real Epistemology", in *Social Epistemology*, eds. Adrian Haddock, Allan Millar, and Duncan Pritchard (Oxford, Oxford University Press, 2010): 2, 26.

As we can observe, the notion ‘belief’ has been used in two different ways in the literature on doxastic attitudes. On the one hand, ‘belief’ is used as a *coarse-grained technical concept* designating any doxastic attitude that has an affirmative stance towards its content. This is the case, for instance, in the Triad position, mentioned above, according to which an agent chooses to take an attitude of assent, dissent or neutrality towards a given proposition.<sup>13</sup> If one chooses an attitude of assent, it is called ‘belief,’ irrespective of the intensity, degree, purpose or circumstances of this assent. For many analytical purposes, this abstraction from situational details can safely be made.

On the other hand, in the exploration of the various doxastic attitudes or belief-like attitudes, ‘belief’ is also employed as a *fine-grained concept* designating a specific doxastic attitude intuitively assumed to be more or less equivalent to a folk psychological notion of belief. This is clearly not the same use of ‘belief’ as in its coarse-grained meaning, as this fine-grained meaning is used to explain the other doxastic attitudes and contrast them with ‘belief’ precisely in terms of differences in intensity, degree, purpose or circumstances. Furthermore, as a general taxonomy of doxastic attitudes is lacking,<sup>14</sup> the other belief-like attitudes are often defined in terms of or with respect to such a specific fine-grained notion of belief, which is then regarded as a primitive and the most central doxastic attitude.<sup>15</sup>

While this double meaning of ‘belief’ should not itself, if properly conceived, pose a genuine problem, a tendency to conflate these two distinct uses in the literature has obscured the fact that the fine-grained notion of ‘belief’ is, unlike the rather precise and technical coarse-grained notion, utterly ambiguous and its specific distinctiveness in relation to other fine-grained doxastic attitudes is far from clear. As I will show, the example uses of the notion ‘belief’ in, for instance, the literature on ‘acceptance’ and in the literature on ‘degrees of belief,’ seem to point to two different fine-grained notions.

I address these problems by proposing a taxonomy for specific doxastic attitudes that is not dependent on any specific fine-grained notion of ‘belief.’ I base this taxonomy on the idea that each agent actually has two quite distinct doxastic attitudes towards a given proposition, a *theoretical* and a *practical* one, corresponding respectively to her credence in the proposition and her policy on

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<sup>13</sup> According to the explanation of this position in Turri, “A Puzzle about Withholding,” 361.

<sup>14</sup> Although a first attempt, from a somewhat different angle, can be found in Engel, “Trust and the Doxastic Family,” 17-26.

<sup>15</sup> An exception to this is the literature on ‘degrees of belief,’ which often takes the latter as the central notion, and defines the notion ‘belief’ in terms of it (see Section 6).

accepting it. This framework, in which the primitive doxastic concepts are ‘degrees of belief’ and ‘acceptance,’ enables me to analyze other specific fine-grained doxastic concepts in terms of these two, including the intended meaning of a fine-grained notion of ‘belief,’ i.e. a meaning that tries to capture the folk notion of belief. It will turn out that the folk notion of belief is a complex notion that specifies to a certain degree both an agent’s theoretical and her practical doxastic attitude towards that proposition. The observed ambiguity in the use of a fine-grained notion of belief can therefore be attributed to the tendency of different authors to stress one or the other part of this dual meaning of ‘belief.’

After defining and explaining this doxastic framework in Sections 2 and 3, and using it to structure the various doxastic concepts in Section 4, I will use this framework in the final sections to re-assess two important debates in the literature on doxastic attitudes: namely the distinction between ‘belief’ and ‘acceptance’ (Section 5) and the distinction between ‘(plain) belief’ and ‘degrees of belief’ (Section 6).

This elaboration will allow me to defend my reductionist stance to keep the notion of ‘belief’ philosophically only in its coarse-grained technical sense (as exemplified in the Triad view), while reducing it to an appropriate expression in terms of ‘degrees of belief’ and ‘acceptance’ in cases that require analysis of a particular and more specific notion of belief.

## 2. Doxastic Attitudes and Doxastic Concepts

I will start by addressing a minor conceptual issue to prevent confusion later on. In the literature, the notion ‘doxastic attitude’ is actually used in two senses. On the one hand, one can speak of the doxastic attitude of an agent towards  $p$ : although it gives us no further information about the nature of this attitude, because it is generic, it refers to the agent’s attitude itself. On the other hand, one can speak of, for example, ‘assuming’ as a doxastic attitude. In this case, it refers to the type of an agent’s doxastic attitude. I will avoid this confusion by using the notion ‘*doxastic concept*’ for the different types, and, henceforth, ‘*doxastic attitude*’ only for the generic attitude itself. In these terms, we can say, for example, that the nature of an agent’s doxastic attitude towards  $p$  can be specified by choosing an appropriate doxastic concept such as ‘accepting,’ ‘assuming,’ ‘being certain’ etc.<sup>16</sup> Moreover, I will restrict my use of the term ‘*concept*’ to this technical sense and use the term ‘*notion*’ for general purposes.

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<sup>16</sup> It has been suggested to me that the type-token distinction could be used to capture this difference, but I am afraid that this might cause confusion here: on the one hand, a ‘doxastic concept’ is a specific interpretation of a generic ‘doxastic attitude’ (hinting that ‘doxastic

To evade reference to the notion of belief, let me define doxastic attitudes in terms of the notion of *direction of fit*. This notion, first applied in the context of propositional attitudes by Searle,<sup>17</sup> is a commonly acknowledged way to distinguish doxastic attitudes from other propositional attitudes, because the direction of fit is regarded as the main difference between ‘belief’ and ‘desire,’ the two basic (coarse-grained) exemplars of propositional attitudes.<sup>18</sup>

In adopting a propositional attitude with a *mind-to-world direction of fit* (for instance, an attitude of belief), an agent aims to match the content of her attitude to the external world. In case of a mismatch, it is the content of the attitude that should be adapted. Accordingly, these attitudes can be judged to be true or false. In adopting a propositional attitude with a *world-to-mind direction of fit* (for instance, an attitude of desire), the agent aspires to match the world to the content of her attitude. In case of a mismatch, this cannot be remedied by changing the content of the attitude; it is, in a sense, the world that should be different. Accordingly, these attitudes can only be judged to be fulfilled or unfulfilled.

I define *doxastic attitudes* (and, hence, *doxastic concepts*) to be propositional attitudes (or concepts) that satisfy the following criteria:

- (a) they have a mind-to-world direction of fit;
- (b) they have no world-to-mind direction of fit;
- (c) they are defined only in terms of criteria that are internal with respect to the agent holding the attitude.

I have added conditions (2) and (3) to the colloquial definition of a doxastic attitude in terms of ‘direction of fit’ in order to exclude both propositional attitudes with a double direction of fit (e.g. ‘fearing that  $p$ ,’ which involves both thinking that  $p$  is credible (mind-to-world) and wanting that  $\sim p$  is the case (world-to-mind)) as well as attitudes that depend somehow on external criteria such as ‘knowing that  $p$ ’ (for which it is commonly accepted that this implies, at least, that  $p$  is true; a criterion that is independent of the agent).

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concepts’ are tokens of the type ‘doxastic attitude’); on the other hand, ‘doxastic concepts’ are still abstract types of attitudes, while the generic notion ‘doxastic attitude’ is often used to refer to the (unspecified) token attitude of a particular agent.

<sup>17</sup> Searle, *Intentionality*, 7.

<sup>18</sup> Williams, “Belief, Desire and the Praxis of Reasoning,” 124; Oppy, “Propositional attitudes.”

### 3. The Theoretical and the Practical Doxastic Attitude

By considering the various doxastic concepts, one can observe that in fact they specify two different doxastic attitudes. This has already been noted by scholars working on the notion of acceptance.<sup>19</sup> Given a proposition  $p$  and an agent  $S$ ,  $I$  define these two attitudes as follows:

(TDA) the *theoretical doxastic attitude*: the credence  $S$  gives to  $p$  or the confidence  $S$  has in the truth of  $p$ .

The nature of an agent's theoretical doxastic attitude towards  $p$  can be found out by asking her: "How likely is it, do you think, that  $p$  is true?" Her response can vary from the expression of a gut feeling to a fully reasoned answer. In any case, the agent's attitude will be the result of an assessment of the truth of  $p$ , based on what she regards as relevant evidence for it, and its expression can range gradually from an absolute disbelief in  $p$  to a total conviction concerning  $p$ 's truth.

(PDA) the *practical doxastic attitude*: the policy  $S$  has on trusting  $p$  and relying on its content.

The nature of an agent's practical doxastic attitude can be found out by asking her: "In which type of circumstances would you let your reasoning and actions depend on this proposition, and in which not?" Her response can vary from a vague reference to some archetypical contexts to a precise demarcation criterion in terms of a specific property of the circumstances. Accordingly,  $S$ 's attitude will be the result of an assessment by her of the practical consequences of relying on the truth of  $p$ , and can range from a willingness to assume  $p$  only in hypothetical arguments to accepting  $p$  under any circumstances.

In the event that the particular circumstances or context are given, let us call them  $C$ , the practical doxastic attitude reduces to the following derivative attitude:

(PDAC) the *practical doxastic attitude in a context*: the policy  $S$  has on trusting  $p$  in the particular context  $C$ , i.e. whether or not she relies on  $p$  in the context  $C$ .

This time, an agent's attitude will be the result of a yes-or-no decision as to whether she is willing to let her reasoning and actions depend on  $p$  in some given particular situation. As such, the premises for practical reasoning are constituted by the agent's practical doxastic attitudes in the context at hand.

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<sup>19</sup> See e.g. Engel, "Trust and the Doxastic Family," 20-21.

Let me add five further clarifications. Where confusion might arise concerning which variant of the doxastic attitudes is intended, I will add the relevant acronym, namely TDA, PDA or PDAC.

First, it is clear that given any proposition and any agent, one can construct an answer to both of the questions stated in the explanations of (TDA) and (PDA) above. Although these answers may be expressed at different levels of detail, it is possible to speak both of an agent's theoretical and of her practical doxastic attitude towards a particular proposition. These descriptions are clearly not the same thing: the judgment of a proposition's truth (TDA) can be a very balanced report, which is quite independent of the circumstances one finds oneself in at that moment. On the other hand, whether one lets one's reasoning depend on that proposition in a particular context (PDAC), is a yes-or-no decision which may well turn out differently in different types of circumstances or for different types of possible actions. As such, a very subtle policy (PDA) can be generated.

Second, the demarcation between contexts in which the agent relies on a proposition and those in which she does not (PDA) is determined at least by the positive consequences the agent foresees in case she is right and the negative ones she is willing to accept in case she is mistaken. These consequences, which are considered only from the agent's perspective (in other words, irrespective of the actual consequences), can vary a great deal and are often hard to compare. In accordance with Bayesian decision theory, the weighted sum of the relevant consequences can be called the *expected utility* for the agent of relying on a certain proposition in a certain context. But as it is not needed for our purposes that agents actually make such calculations, it suffices to assume that agents can compare the consequences they foresee qualitatively.

Third, the attitudes are defined descriptively without reference to rational behavior or to any normative theory. For rational agents, theoretical and practical doxastic attitudes are of course related: propositions of which one is fairly confident that they are true will be relied on in a wide variety of circumstances, while propositions that one suspects of being false will be relied on only in contexts in which the penalty of being mistaken is rather low.

In fact, Bayesian decision theory provides a method for calculating the most rational practical doxastic attitude in a certain context (PDAC) given an agent's degrees of belief towards the relevant propositions (a quantitative description of her TDA) and (quantified) expected utilities of relying on those propositions in that context. However, agents are clearly not always able to perform these quantifications and calculations effectively. This explains why in everyday circumstances, even if an agent intends to be rational, her theoretical and practical

attitudes will sometimes appear to be at odds. Also, even rational agents differ in their perceptions of the utilities: two agents having the same degree of confidence in a proposition might rely on it differently in similar circumstances. This explains why the various folk notions describing doxastic attitudes allow for independent descriptions of an agent's theoretical and practical doxastic attitude towards a certain proposition (see Section 4).

Fourth, the theoretical doxastic attitude resembles what classical epistemologists typically have in mind when talking about doxastic attitudes (as it reports the agent's perception of the truth of a proposition). To them, the practical doxastic attitude may seem an awkward addition. Yet it is a genuine doxastic attitude. For recall the three requirements stipulated in the definition of doxastic attitudes. First, the theoretical doxastic attitude clearly has a mind-to-world direction of fit: an agent adopts a policy to trust  $p$  depending on how she perceives the world and what might happen in it, and therefore her policy reflects her perception of the world.<sup>20</sup> Secondly, there is no world-to-mind direction of fit with respect to  $p$ : in purely specifying the circumstances in which she trusts  $p$ , an agent does not express any desire that the world should confirm to the content of  $p$ . Thirdly, the attitude is defined solely in terms of the agent's internal perception of the circumstances, the consequences she herself foresees and her assessment of the trustworthiness of the proposition, all of which are criteria internal to her.

Fifth, it is common to define the philosophical notion of 'degrees of belief' technically in terms of dispositions to bet, which would reduce the theoretical doxastic attitude (TDA) to a mere variation of the practical doxastic attitude (PDA). Such an operationalist view, which has proven to be an excellent starting point for rational decision theory, is, however, not a problem for the framework I am proposing here. My goal is to distinguish two qualitatively distinct human modes of assessing a proposition, resulting in two doxastic attitudes, which can be independently described in a qualitative way, a distinction that is reflected in the various doxastic folk notions (see Section 4). I accept that, for the theoretical attitude, it may be possible that humans can only make qualitative comparisons, and that, if the attitude needs to be operationalized quantitatively (for use in a

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<sup>20</sup> To clarify this point, consider the following example: an agent  $S$  decides to accept the proposition  $p$ , having no specified theoretical attitude towards it, for a certain *research context* (a context in which the consequences of being mistaken are negligible). Suppose that during this research,  $S$  gathers evidence that  $p$  is very unlikely. Apart from specifying  $S$ 's theoretical doxastic attitude towards  $p$ , this evidence will also lead  $S$  to adapt her practical doxastic attitude:  $S$  will now accept  $p$  in hardly any context (where before she was willing to trust it for research contexts). In other words, the agent aims to match her policy (her attitude) to the perceived external world.

normative theory of decision making), this can probably be done only by equating theoretical attitudes (TDA) with practical doxastic attitudes for certain artificial and purified contexts (PDAC) such as ‘no strings attached’ bets.<sup>21</sup> Yet though it can be argued that the quantitative operationalization of the notion ‘degrees of belief’ is, in a technical sense, an (artificial) practical doxastic attitude, the notion can still be used qualitatively as a primitive doxastic concept to describe the theoretical doxastic attitude, as this operationalization is not required for describing various folk notions of doxastic attitudes.

In summary, then, and taking the agent’s evidence to be fixed at a certain moment, the theoretical doxastic attitude (TDA) is a context-insensitive doxastic attitude that allows for a range of degrees of confidence in the truth of  $p$ , while the practical doxastic attitude (PDA) is a context-sensitive attitude that reduces to a yes-or-no decision in each context (PDAC) depending on the expected utility of the two options in that context. For rational agents, these two attitudes towards a certain proposition are related, but the nature of this relation depends on how each particular agent balances her theoretical appraisal with expected utility.

#### 4. Three Categories of Doxastic Concepts

The many known doxastic concepts, such as ‘doubting,’ ‘accepting,’ ‘assuming,’ ‘having some confidence,’ ‘suspending judgment,’ ‘hypothesizing,’ ‘being certain of,’ ‘suspecting’ and ‘believing’ (in its specific and intuitive folk psychological meaning) may all be regarded as (partial) descriptions of the nature of either one or both of the two doxastic attitudes I have distinguished.

Of these doxastic concepts, some, such as ‘having a particular degree of confidence in (the truth of)  $p$ ,’ ‘giving  $p$  some credit’ or ‘being (un)certain of  $p$ ’ give a clear description of the nature of the theoretical doxastic attitude of the agent towards the proposition. They specify up to a certain level of detail how the agent judges the truth of  $p$ , but give hardly any information about when the agent intends to let her reasoning depend on  $p$ . For instance, suppose that an agent acknowledges that her chances of recovering from a disease are fifty-fifty (TDA). In other words, her degree of confidence in the truth of either possibility, of recovering or not, is equally large. This information tells us nothing about her practical doxastic attitudes (PDA). An optimistic person might base all her practical reasoning and actions on the premise that she will recover, while a

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<sup>21</sup> In real life, winning or losing a bet has not only monetary consequences, but also psychological and social ones in the form of joy, sadness, self-confidence boosts or dips, gain or loss of social prestige, etc. Therefore, it is hard to call the bet contexts used to define ‘degrees of belief’ actual real-life contexts.

pessimist might do the opposite. As concepts of this type describe only the theoretical doxastic attitude of an agent towards  $p$ , they can be called, in short, *theoretical doxastic concepts*. Of these, 'having a *particular degree* of confidence in the truth of  $p$ ' can be regarded as the basic or primitive notion, because it allows for a description of any theoretical doxastic attitude by specifying 'a particular degree' qualitatively. For example, 'being certain' means having full confidence, while 'giving some credit' means that one takes 'a particular degree' to mean a substantial amount, but generally less than the amount of confidence in the other option.

Other doxastic concepts, such as 'accepting that  $p$  is the case,' 'suspending judgment as to whether  $p$  is the case,' 'taking  $p$  to be a relevant possibility' are examples of *practical doxastic concepts*. They indicate the type of circumstances or contexts in which the agent will let her reasoning depend on  $p$  (or not) (PDA), while giving hardly any further information about exactly how much confidence the agent has in the truth of  $p$  (TDA). For instance, in most circumstances, people accept that in general their partner will not lie to them (PDA), but if asked how certain they are about this (TDA), some would answer that they have some doubts whether this is really the case, while others would be fully confident.

Similarly, if an agent suspends judgment as to whether  $p$  is the case, and thus does not rely on  $p$  in any context (PDA), one does not know whether, theoretically,  $p$  or  $\sim p$  seems more plausible to her (TDA). Of the practical doxastic concepts, 'accepting' can be considered the primitive notion, because it allows for a description of any practical doxastic attitude (PDA) by specifying in which contexts the agent accepts the proposition (PDAC).

Finally, some doxastic concepts, such as 'believing that  $p$ ', 'doubting whether  $p$ ,' 'being ignorant about  $p$ ' have both a theoretical and a practical meaning, or, in other words, describe to some degree the nature of both the agent's theoretical and practical doxastic attitude towards  $p$ . For instance, when an agent believes  $p$  (in its intuitive folk meaning), we certainly know that she has a high degree of confidence in the truth of  $p$  (TDA), but we also know (because people state their beliefs when prompted to give reasons for their actions) that she will be willing to base her practical reasoning on  $p$  as a premise in a large range of circumstances (PDA). The ambiguity of this notion arises from the fact that one can emphasize one part or the other, the theoretical or the practical, as we will see in the following sections.

The remainder of this paper will examine how to understand this dual nature, both theoretical and practical, of the folk notion of 'belief.' This will be done by applying the conceptual framework presented thus far in order to reassess

two important debates in epistemology: namely concerning the difference between 'belief' and 'acceptance' and the difference between '(plain) beliefs' and 'degrees of belief.'

The main goal of this analysis will be to show that 'belief' cannot be retained as a specific fine-grained primitive doxastic concept (apart from its technical coarse-grained meaning). If one tries to capture the intuitive sense of the folk notion of belief, one obtains a complex and, hence, secondary notion, reducible to a suitable expression of 'degrees of confidence' and 'acceptances.' I will argue that these two concepts are far better suited than 'belief' to be considered as primitive doxastic concepts, because each of them specifies only one of the two doxastic attitudes. Still, precisely because of this dual nature of the folk notion of belief, the notion of 'belief' can be retained in its coarse-grained philosophical sense, as denoting any doxastic attitude (either practically or theoretically) that assents to its content, as long as one takes care to specify the attitude more precisely in detailed philosophical analysis.

## 5. Belief and Acceptance

The notion 'acceptance' was introduced by Van Fraassen to describe the attitude of scientists towards their most empirically adequate theories.<sup>22</sup> According to him, acceptance of a theory does not necessarily entail that one believes it,<sup>23</sup> yet at the same time encompasses more than belief, because the attitude of acceptance has the pragmatic dimension of commitment to a theory, which is a question not of truth but of usefulness.<sup>24</sup>

Given the importance of the notion of acceptance in general and its difference from belief, it soon became a research topic for epistemology. The most influential epistemological account to date has been given by Cohen, who defines *acceptance* of  $p$  as having or adopting

[...] a policy of deeming, positing or postulating that  $p$  – i.e. of including that proposition or rule among one's premises for deciding what to do or think in a particular context, whether or not one feels it to be true that  $p$ .<sup>25</sup>

Cohen further states that acceptance, unlike belief, is more or less under an agent's voluntary control<sup>26</sup> and acknowledges implicitly that acceptance is a

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<sup>22</sup> Van Fraassen, *The Scientific Image*, 4.

<sup>23</sup> Van Fraassen, *The Scientific Image*, 9, 46.

<sup>24</sup> Van Fraassen, *The Scientific Image*, 88.

<sup>25</sup> Jonathan Cohen, *An Essay on Belief and Acceptance* (Oxford: Oxford University Press, 1992), 4.

context-dependent notion.<sup>27</sup> These two characteristics are also stressed by other authors such as Bratman<sup>28</sup> and Engel.<sup>29</sup> Engel further holds that, while truth is the criterion for evaluating beliefs, utility is the criterion for acceptances.<sup>30</sup> A final explanation of the distinction between these two notions is given by Lehrer, who approaches the topic from a somewhat different point of view. According to him, belief is a first-order doxastic state, while acceptance is a second-order 'metamental' state based on a reflective evaluation of one's first-order beliefs.<sup>31</sup> Yet I am tempted here to follow Engel, who notes that Lehrer's account neglects the important pragmatic aspect of acceptance as well as the idea of trust, which is inherent in the notion.<sup>32</sup> Therefore, I do regard acceptance as a first-order attitude having propositions as its content, not beliefs. Yet this does not prevent one from regarding beliefs, in the spirit of Lehrer's view, as constitutive in the formation of one's acceptances. If the acceptance towards a proposition is consciously formed (by e.g. applying a kind of decision theory), this decision will clearly have taken into account beliefs about this proposition and related ones, such as the foreseen consequences of particular actions.

Using the framework introduced in this paper, it seems at first sight possible to describe the distinction between these two notions as the difference between a theoretical doxastic concept ('belief') and a practical one ('acceptance'). Of the four contrasting features between beliefs and acceptances that are pointed out in the literature, the context-sensitivity of acceptances (and practical doxastic attitudes in general) and utility as their evaluation criterion have already been discussed in previous sections. The other two contrasting features relate to the fact that an agent's practical doxastic attitude (PDAC) can be the result of a decision. Given that such a decision takes into account the agent's theoretical doxastic attitude (TDA), among other things such as an assessment of the circumstances, it can be understood why acceptances are more under an agent's voluntary control and influenced by her theoretical doxastic attitudes.

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<sup>26</sup> Cohen, *An Essay on Belief and Acceptance*, 20.

<sup>27</sup> Cohen, *An Essay on Belief and Acceptance*, 14.

<sup>28</sup> Michael E. Bratman, "Practical Reasoning and Acceptance in a Context," *Mind* 101, 401 (1992): 5.

<sup>29</sup> Pascal Engel, "Believing, Holding True, and Accepting," *Philosophical Explorations* 1, 2 (1998): 145-48.

<sup>30</sup> Engel, "Believing, Holding True," 146-48.

<sup>31</sup> Keith Lehrer, "Acceptance and Belief Revisited," in *Believing and Accepting*, ed. Pascal Engel (Dordrecht: Kluwer Academic Publishers, 2000): 209.

<sup>32</sup> Engel, "Trust and the Doxastic Family," 17.

Notwithstanding the *prima facie* plausibility of this first analysis of the distinction between ‘belief’ and ‘acceptance,’ Frankish argues convincingly that distinguishing these attitudes as such – in our framework, considering belief as a theoretical doxastic concept and acceptance as a practical one – is problematic, because it “suggests that acceptance is not a form of belief at all, but a wholly different attitude.”<sup>33</sup> He agrees that there are acceptances that are not beliefs, but maintains that “it would be perverse to claim that none of them are.”<sup>34</sup> In other words, people do believe some (if not most) of the states present in their conscious practical reasoning.

Frankish’s concern is a genuine one. It may be pointed out in response that regarding beliefs and acceptances as distinct attitudes does not imply that an agent could not hold both of them towards a single proposition. But the fact that beliefs can serve as premises even if no form of decision theory or other form of conscious consideration is applied suggests that the adoption of a new belief must in itself directly imply the acceptance of this newly believed proposition for certain circumstances. In other words, acceptance for certain circumstances is part of the meaning of the attitude of believing, such that the folk notion of ‘belief’ cannot be a purely theoretical doxastic concept.

Frankish explains this problem by classifying plain beliefs as a subspecies of acceptances, i.e. those that are “epistemically motivated and unrestricted as to context.”<sup>35</sup> His explanation, however, seems at least a little awkward, because context-dependency is an inherent feature of Cohen’s definition of acceptance, which Frankish himself embraces. Frankish’s idea of unrestrictedness as to context implies that a belief can serve as a premise for practical reasoning in any context. But if a believed proposition may be considered a true premise in any context, this is the same, it seems, as adopting a policy of trusting the belief in any context: for there is no longer any demarcation between contexts in which one can trust the belief and those in which one cannot. This view is hugely problematic. Kaplan, who calls it the *act view*, argues that it is fallacious<sup>36</sup> – a fact of which Frankish is aware<sup>37</sup> – because agents are not certain of their beliefs. Hence, they will, for example, not bet on the truth of their beliefs if the stakes are too high, even if they

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<sup>33</sup> Keith Frankish, *Mind and Supermind* (Cambridge: Cambridge University Press, 2004), 86.

<sup>34</sup> Frankish, *Mind and Supermind*, 87.

<sup>35</sup> Keith Frankish, “Partial Belief and Flat-Out Belief,” in *Degrees of Belief*, Synthese Library Vol. 342, ed. Franz Huber and Christoph Schmidt-Petri (Dordrecht: Springer, 2009), 86.

<sup>36</sup> Mark Kaplan, *Decision Theory as Philosophy* (Cambridge: Cambridge University Press, 1996), 104.

<sup>37</sup> Frankish, “Partial Belief and Flat-Out Belief,” 82.

are fully convinced. The act view would instruct them to always trust their belief and accept any bet.

The initial explanation of the distinction between ‘belief’ and ‘acceptance,’ outlined above, can be modified as follows in order to cope with Frankish’s concern. ‘Acceptance’ is, as noted, a purely practical doxastic concept, but the folk notion of ‘belief’ actually has both a theoretical and a practical meaning. On the one hand, it means that an agent has *at least* a rather high degree of confidence in the truth of the proposition. Exactly how high need not be numerically expressible, but a decent amount that is clearly larger than the amount of confidence in the opposite proposition is always minimally implied. On the other hand, it also means that the agent is willing to base her practical reasoning on this proposition in *at least* all contexts where the negative consequences in case she is mistaken seem acceptable to her.<sup>38</sup> This includes contexts where she cannot or does not assess these consequences, but where she has no reason to think that much depends on whether she trusts this proposition or not.

Keeping this in mind, one can identify the well-known examples in the literature on ‘acceptance,’ in which an agent does not act or reason on her beliefs, as contexts where these negative consequences are unacceptable for the agent. Consider the following example, often cited and originally developed by Cohen:<sup>39</sup> an attorney accepts that her client is innocent in the context of a particular trial, even though her own belief is that he is guilty. She does not accept her own belief in the context of the trial because the negative consequences of acting on that belief are unacceptable in this context, not only for her personal career but also, and more importantly, for the social institution of the judicial system. In contexts where the negative consequences of accepting her own belief are not so prominent, for example when she talks about the case with her husband/wife, the attorney might express and reason upon her own belief.

In conclusion, the folk notion of ‘belief’ describes the nature of both the theoretical and the practical attitude of an agent towards a certain proposition, and should therefore be handled with care. This double meaning – on the one hand, having a sufficiently high degree of confidence in the proposition’s truth (TDA), and on the other, being willing to rely on it in at least all contexts where

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<sup>38</sup> Of course, holding a belief might entail that one accepts it in many more contexts. For instance, if I come to believe that there are no cars coming down the road by having a look in both directions, I will accept this proposition in the present context in which I have to decide whether I will cross the road, even though the consequences of being mistaken – being hit by a car – are not at all acceptable to me.

<sup>39</sup> Cohen, *An Essay on Belief and Acceptance*, 25.

the consequences of being mistaken seem to be acceptable (PDA) – also explains the diverging views one finds in the debate about ‘belief’ and ‘acceptance,’ because it is possible to lay the emphasis more on the theoretical or on the practical aspect of belief. When Van Fraassen, Cohen and others try to identify the differences between acceptances and beliefs, they appeal to intuitions about the theoretical meaning of ‘belief,’ a meaning which ‘acceptance’ lacks. But when Frankish rightly points out that some acceptances actually are beliefs, he appeals to existing intuitions about the practical meaning of ‘belief.’

## 6. Belief, Degrees of Belief and the Bayesian Challenge

The conceptual framework of this paper and the double meaning of the folk notion of belief can also help explain the distinction between the concepts ‘*plain belief*’ and ‘*partial belief*,’ the attitude of having a particular *degree of confidence* or *degree of belief* in a proposition, as well as the requirement put on any explication of this distinction by the Bayesian Challenge. This is the name given by Kaplan<sup>40</sup> to a problem that has been formulated in various ways by different authors; see for example Jeffrey<sup>41</sup> for an early formulation and Frankish<sup>42</sup> for a fairly recent one. Let us consider Frankish’s formulation here. As he writes:

Bayesian decision theory teaches us that the rational way to make decisions is to assign degrees of probability and desirability to the various possible outcomes of candidate actions and then choose the one that offers the best trade-off of desirability and likely success. [...] How can flat-out belief and desire have the psychological importance they seem to have, given their apparent irrelevance to rational action?<sup>43</sup>

It is my own view, and the view of the authors who have formulated the Bayesian Challenge, that any account of the relation between plain belief and degrees of belief must also give a satisfying answer to this challenge. Generally speaking, three strategies to specify the relation between ‘plain belief’ and ‘partial belief’ are discernible in the literature.

A first strategy, and the one that has been most extensively explored, is what Foley has called the Lockean Thesis:

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<sup>40</sup> Kaplan, *Decision Theory as Philosophy*, 89-101.

<sup>41</sup> Richard C. Jeffrey, “Dracula meets Wolfman: Acceptance versus Partial Belief,” in *Induction, Acceptance and Rational Belief*, Synthese Library Vol. 26, ed. Marshall Swain (Dordrecht: Reidel, 1970): 158-61.

<sup>42</sup> Frankish, “Partial Belief and Flat-out Belief,” 76.

<sup>43</sup> Frankish, “Partial Belief and Flat-out Belief,” 76

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To say that we believe a proposition is just to say that we are sufficiently confident of its truth for our attitude to be one of belief.<sup>44</sup>

Yet this strategy, which, in our framework, identifies ‘believing that  $p$ ’ as a theoretical doxastic concept and defines it in terms of a threshold for the degree of belief in  $p$ , faces two severe threats.

First, this strategy has to cope with the famous lottery<sup>45</sup> and preface<sup>46</sup> paradoxes, which show that the Lockean thesis can yield inconsistent beliefs when combined with the aggregation principle for beliefs (which states that the conjunction of two beliefs is also a belief). These paradoxes are typically met by softening or qualifying the aggregation principle,<sup>47</sup> but this is generally done by introducing some context-sensitivity, which is hard to bring into accordance with the idea that degrees of belief (to which beliefs can, according to the Lockean thesis, be reduced) are, like all theoretical doxastic concepts, defined independent of context.<sup>48</sup>

Second, this strategy also fails to meet the Bayesian Challenge, given that this challenge to explain the psychological importance of plain beliefs appeals particularly to intuitions of ‘belief’ as a practical doxastic concept. Theoretically, there may be a very minimal difference between an acquired belief and a proposition that falls just short of the threshold for belief, as degrees of belief are considered to be on a continuous scale. The Bayesian view perfectly explains how even a small difference in this regard can lead to widely divergent decisions based on this belief. It cannot explain, however, why agents, once they have acquired a belief, tend to take it into account in the most diverse situations, even situations to which the acquired belief is only marginally significant. This behavior can only be understood if we assume that an agent does not run a full Bayesian analysis for any

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<sup>44</sup> Richard Foley, “The Epistemology of Belief and the Epistemology of Degrees of Belief,” *American Philosophical Quarterly* 29, 2 (1992): 111.

<sup>45</sup> Henry Kyburg, *Probability and the Logic of Rational Belief* (Middletown: Wesleyan University Press, 1961), 197.

<sup>46</sup> David C. Makinson, “The Paradox of the Preface,” *Analysis* 25 (1965): 205-207.

<sup>47</sup> For some alternative approaches, see Igor Douven, “A New Solution to the Paradoxes of Rational Acceptability,” *The British Journal for the Philosophy of Science* 53, 3 (2002): 391-410; Igor Douven, “The Lottery Paradox and our Epistemic Goal,” *Pacific Philosophical Quarterly* 89, 2 (2008): 204-225.

<sup>48</sup> It might be argued that if degrees of belief are defined in terms of betting behavior, they are in fact context-dependent. But the artificial context of a “no strings attached” bet, which is created to operationalize the idea of degrees of belief and has no real occurrence, should not be confused with the context in which a real agent is situated and in which she needs to take a decision. Her degree of belief in a proposition is independent of this actual context.

decision but simply adopts a policy to start relying on a belief in a large set of contexts once she has acquired it.

A second common strategy to specify the relation between '(plain) belief' and 'partial belief' is to regard 'plain belief' as a kind of behavioral disposition arising from an agent's partial beliefs, e.g. a disposition to assert the belief as a proposition<sup>49</sup> or to accept it.<sup>50</sup> These strategies identify belief solely as a practical doxastic concept. However, while this identification may meet the Bayesian Challenge, it fails to accord with our common (theoretical) intuitions about the context-insensitivity of beliefs. As long as there are no changes in the evidence an agent perceives, she will likely suppose that her beliefs hold in any context she may find herself in, while a characterization of 'belief' as a practical doxastic concept requires – to avoid the pitfall of the aforementioned act view – that one limits the set of circumstances in which the belief holds.

Finally, some authors, such as Bratman<sup>51</sup> and Jeffrey,<sup>52</sup> seem implicitly to deny the existence of plain beliefs and reduce them in every case either to a degree of belief or to an acceptance in certain contexts.

To implement this third strategy explicitly seems to me the best proposal. The intuitive folk notion of belief entails both, theoretically, that the agent has a sufficiently high context-insensitive degree of confidence in the truth of the proposition and, practically, that the agent has adopted a policy of relying on this proposition in at least all circumstances where the consequences of being mistaken seem acceptable to her.

This duality in the meaning of the notion can give rise to ambiguity, hence making it unfit for the philosophical analysis of doxastic concepts. Consider again some of the examples described above, which pop up in the literature. Take the attorney who believes that her client is actually guilty: does this mean that, although the attorney is quite confident about her client's guilt (TDA), she practically bases all her reasoning on his innocence (PDA)? Or does it mean that, except for her public appearances in court, she reasons on the basis of his guilt to determine her strategy (PDA)? Or consider another example, of a woman who believes that her husband/wife is not cheating on her. Does this just mean that she takes this to be the case without questioning it (PDA), although she has to admit that she cannot be fully certain (TDA)? Or does it mean that she is also

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<sup>49</sup> Kaplan, *Decision Theory as Philosophy*, 109.

<sup>50</sup> Frankish, "Partial Belief and Flat-Out Belief," 86.

<sup>51</sup> Bratman, "Practical Reasoning and Acceptance," 1-16.

<sup>52</sup> Jeffrey, "Dracula meets Wolfman," 157-85.

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wholeheartedly confident about it (TDA)? Clearly, the notion of 'belief' is not precise enough to describe the particular attitudes in these examples.

In light of these considerations, it seems clear that we can gain precision in our analyses of doxastic concepts by replacing any fine-grained specific concept of 'belief' with the more precise and primitive concepts of 'degrees of confidence' and 'acceptance,' for using the latter concepts makes it possible to clarify whether the theoretical, the practical or both attitudes are meant. Still, when agents report on their doxastic attitudes towards  $p$ , the attitudes of 'having a high degree of confidence in  $p$ ' and 'being willing to rely on  $p$  if the negative consequences seem acceptable' are often present together. Therefore, I see no problem in retaining the folk notion of 'belief' as a somewhat ambiguous but sufficiently clear shorthand to denote both attitudes in daily life. Also, precisely because of its rather broad meaning, 'belief' in a coarse-grained sense can be retained as a technical concept referring to any doxastic concept that expresses an attitude of assent to its content. In detailed philosophical analysis, however, much precision can be gained by eliminating altogether the idea that there exists a specific and unambiguous fine-grained doxastic notion of 'belief.'

## 7. Conclusion

In this paper, I have shown that, in the literature on 'doxastic attitudes', the notion of 'belief' is used both in a coarse-grained sense to indicate any doxastic attitude that indicates assent towards a proposition, and in a more specific, fine-grained sense to be contrasted with other doxastic concepts such as 'acceptance' or 'having a specific degree of belief.' I have argued that, while the coarse-grained meaning of 'belief' is technically sound and useful for philosophical analysis, the fine-grained meaning, which draws on the intuitive folk notion of belief, is utterly ambiguous.

In order to dispel this ambiguity, I have presented a new framework for describing fine-grained doxastic attitudes which is not reliant on a specific and intuitively clear fine-grained concept of 'belief.' In this framework, I distinguish between an agent's theoretical doxastic attitude (her credence in  $p$ ) and her practical doxastic attitude (her policy on trusting  $p$  to be used as a premise for her practical reasoning). Given this distinction, all well-known doxastic concepts can be placed into one of three categories: theoretical doxastic concepts (of which 'having a certain degree of confidence' is the primitive notion), practical doxastic concepts (of which 'acceptance' is the primitive notion) and doxastic concepts that describe both attitudes, such as the folk notion of 'belief.'

After introducing this framework, I have argued for a reductionist stance concerning the idea of an unambiguous and specific fine-grained notion of 'belief' and showed that much precision can be gained in philosophical analysis by using a suitable combination of 'degrees of belief' and 'acceptances' whenever the folk notion of 'belief' is intended.

The applications of this new framework need not, and should not, be restricted to the analysis of 'belief'. An interesting question for further research is whether this framework can provide us with insights into the specific nature of other important doxastic concepts, such as 'entertaining a hypothesis,' 'suspending judgment' or various forms of ignorance. Furthermore, it needs to be investigated whether this reductionist stance on a specific fine-grained notion of belief might also give us more precision in other epistemological debates that rely heavily on the notion of belief, such as debates about rationality, justification and the theory of knowledge.