

(This is a penultimate version. The final version is due to be published in *Blackwell Companion to Epistemology*, 3rd Edition. Please refer to the published version).

Varieties of Pragmatic Encroachment

Jie Gao
Zhejiang University

According to pragmatic encroachment, whether an epistemic attitude towards p has some positive epistemic status (e.g., whether a belief is epistemically rational or justified, or it amounts to knowledge) partially depends on practical factors such as the costs of being wrong or the practical goals of the agent. Depending on such factors, a belief may count as justified or as knowledge in some circumstances but not in others. Pragmatic encroachment is typically contrasted with purism, according to which the epistemic status of an individual depends exclusively on truth-relevant factors, such as the quantity and quality of evidence or the reliability of belief-forming methods.

Pragmatic encroachment comes in many varieties. This survey article provides an overview of different kinds of pragmatic encroachment (hereafter, PE). It focuses on three dimensions under which kinds of PE differ: the type of epistemic status affected by practical factors (§1), the type of practical factors affecting the epistemic status (§2), and the type of normative considerations encroaching on the epistemic status (§3).

1. Types of epistemic status affected by practical factors

According to PE, practical factors could affect different types of epistemic status. This section considers four main types discussed by pragmatic encroachers. These kinds of PE shouldn't be conceived as incompatible alternatives. Some such kinds are interrelated. For example, PE on knowledge-level justification and epistemic rationality entail PE on knowledge.

A. Knowledge

The primary target of PE is *knowledge*. PE on knowledge (also, *knowledge encroachment*) holds that there can be situations in which, even if two subjects, S and S' , both believe that p and are on a par concerning truth-relevant factors relevant to p (same evidence, same reliability, etc), S knows that p whereas S' does not know that p due to a mere difference in practical factors.

This view can accommodate intuitive judgments about a range of cases involving shifting patterns of knowledge ascriptions. These cases are constituted by pairs of scenarios: a low-stakes and a high-stakes one. For instance, in the Bank case, it is stipulated that in both scenarios Hannah is choosing between taking a long queue to pay a cheque on a Friday afternoon or coming back the next morning (DeRose, 1992; Stanley, 2005). Hannah has a true belief that the bank opens the next day based on a memory of her visit to the bank two weeks before. However, the two scenarios differ in what is at stake for Hannah. While in the low-stakes version it does not matter much whether she pays her cheque by Monday, in the high-stakes version it matters a great deal. Intuitively, in the low-stakes scenario, Hannah's evidence is good enough to know that the bank opens on Saturday, whereas in the high-stakes scenario, it is not. Knowledge encroachers, most notably Jason Stanley (2005), argue that the best explanation of this type

of case is that whether one is in the position to know p partially depends on the stakes for one in being right about whether p (the practical costs of error).

A second argument for knowledge encroachment assumes the so-called knowledge norm of practical reasoning. We often appeal to knowledge in our assessments of action. For example, if one doesn't buy health insurance on the grounds that he is healthy enough, his loved ones can criticise him since he doesn't know that he will not get sick. Similarly, when one is on the way to a restaurant and is asked why she went down that direction rather than the other, she can justify her action by saying that she knew that it was the shortest direction to the restaurant (Hawthorne & Stanley, 2008). Such patterns of assessment suggest that knowledge plays an important normative role in practical reasoning. This motivates the idea that knowledge is the epistemic condition that one must possess in order to treat a proposition as a reason for action and rely on it in practical reasoning (Hawthorne, 2004; Hawthorne & Stanley, 2008; Stanley, 2005). If we combine the knowledge norm with judgments about the propriety of practical reasoning in different contexts, we get the following argument:

1. One is in a good enough epistemic position to rely on p in one's practical reasoning if and only if one knows that p . (The knowledge norm of practical reasoning)
2. In pairs of cases like the Bank, in the low-stakes scenario, but not the high-stakes scenario, Hannah is in a good enough epistemic position to rely on the target proposition in her practical reasoning.
3. In the low-stakes, but not in the high-stakes scenario, Hannah knows the target proposition. (From 1 and 2)
4. The low- and high-stakes scenarios differ only in practical factors such as the stakes in being right about whether p . (Assumption)
5. Practical factors are relevant in determining whether one knows that p . (From 3 and 4)

Jeremy Fantl and Matthew McGrath (2009) offer another type of argument based on the knowledge norm of practical reasoning. They argue that the following three ideas generate a trilemma: i) purism about knowledge, ii) fallibilism, and iii) the sufficiency direction of the knowledge norm of practical reasoning (if a subject knows that p then she is in a good enough epistemic position to rely on p in her practical reasoning). Fallibilism holds that a subject may know that p even though there is a small (non-zero) epistemic chance for her that not- p . A consequence of fallibilism is that there will be low-stakes scenarios where the subject knows that p although there is a small epistemic chance for her that not- p . However, stakes could be raised high enough so that, due to the small but real chance of not- p , it will be inappropriate for the subject to act on p . According to the sufficiency direction of the knowledge norm for practical reasoning, in this possible high-stakes scenario the subject does not know that p . But since low-stakes and high-stakes scenarios differ only in the stakes, it follows that whether one knows depends on the stakes, and hence on practical factors. According to Fantl and McGrath, the weakest of the three initial ideas is purism. Thus, abandoning purism is the best solution to the trilemma.

Brian Weatherson (2012) suggests another argument for knowledge encroachment. This argument is based on a knowledge-based decision theory. According to this theory, the structure and information in a decision table must match one's knowledge. More specifically, a state should appear on a decision table if and only if one doesn't know that that state doesn't obtain. If one knows that a certain relevant state in the decision table will not happen, one can ignore the consequence of possible actions under that state. Weatherson then invites us to imagine a case in which intuitively a subject knows that p . For example, you hear your partner's voice in the nearby room, and thereby come to know that your partner is at home. Suppose, however, that you are offered a bet with very high stakes about whether your partner is at home

(p) (e.g., 1000 years of torture if you bet for the truth of p and you lose, but a candy if you win). Now if you know that p , the state of not- p can be eliminated from your decision table. And if the not- p state is not on the table, then the dominating option (which delivers the better outcome under all the relevant states in the table) is to take the bet. If it is rationally permissible to take dominating options (as standard decision theory prescribes), then it should be rationally permissible for you to take the bet. But intuitively, it is not. Weatherson suggests that the best solution to this problem is to accept that knowledge that p can be sustained until it is defeated by the offer of the high-stakes bet.

B. Justification, rationality and evidence.

Knowledge encroachment is closely related to *justification encroachment*. A variant of justification encroachment focuses on *knowledge-level justification*. Knowledge-level justification denotes an epistemic support for a doxastic state that is strong enough to meet the epistemic standards required for knowledge. Fantl and McGrath (2009) defend the following principle concerning knowledge-level justification:

(JJ) If you are justified in believing that p , then p is warranted enough to justify you in ϕ -ing, for any ϕ .

By “ p is warranted enough for you to justify in ϕ -ing”, Fantl and McGrath roughly mean that your epistemic support for p is good enough to justify you (make you reasonable) to perform a certain action. However, whether this support is good enough may depend on what is at stake for you. For instance, having been to the bank on a Saturday two weeks ago may make the proposition [the bank will be open tomorrow] warranted enough for Hannah to pass on Saturday when the stakes are low, but not when they are high. Now, if whether p is warranted enough to justify you in ϕ -ing depends on stakes, given (JJ) whether you are justified in believing p also depends on stakes.

Mark Schroeder (2012) defends the claim that stakes affect *epistemic rationality*, conceived as the strongest kind of rationality condition on knowledge. Schroeder’s argument is based on the following principle:

(Belief Sufficiency)

It is epistemically rational for S to believe p just in case S has at least as much epistemic reason to believe p as to believe $\sim p$ and S has at least as much epistemic reason to believe p as to withhold judgment with respect to p .

Since evidence either supports or disfavours a certain proposition, reasons to withhold judgment have to be something other than evidence. Schroeder identifies such reasons with two types of costs of error: one associated with having a false belief that p , the other associated with missing out on having a true belief. Schroeder considers costs of error as epistemic reasons on a par with evidence. In this picture, the epistemically rational doxastic attitude is a result of a balance between evidential and practical considerations. While the former are epistemic reasons to believe or disbelieve, the latter are epistemic reasons to withhold judgment.

The foregoing versions of justification encroachment commit to the idea that the degree of evidential support required for justification or rationality varies from case to case depending on the practical circumstance. In this picture, moderately good evidence may be sufficient for a low-stakes subject to justifiably believe that p but not sufficient for a high-stakes subject. Juan Comesaña (2013) argues that practical factors can also determine how much justification or evidence we actually have in favour of a proposition. In other words, the more worried we are about the costs of p ’s being false, the less justification (i.e., evidence) we have for p .

Comesaña argues that this consequence is entailed by the sufficiency direction of the knowledge norm of practical reasoning and a very plausible principle about evidence. According to this principle, if someone is just like you evidentially, except that you have more evidence for the belief that p amounts to knowledge than your counterpart does, then you have more evidence than she does for p . In typical low-high stakes pairs of cases, it is plausible that the high-stakes subject also has evidence that she is not rational to act as if p . If someone commits to the knowledge norm, then she also has evidence that she doesn't know that p . Since the high-stakes subject has this second-order evidence that her counterpart lacks, the high-stakes subject has less evidence than her counterpart for the belief that p is known.

Practical factors may also constrain which type of evidence may legitimately support a belief, or the cognitive strategy or inference patterns one should employ in different contexts. Jennifer Nagel (2010)'s account of the Bank and similar cases is suggestive of the following idea. Nagel argues that high-stakes conditions demand more systematic, thorough and accurate evidence-gathering strategies, whereas in low-stakes situations relatively easy and only moderately reliable evidence-gathering strategies would be good enough. While Nagel considers her own account as a version of purism, Sripada and Stanley (2012) suggest that her account may be committed to PE on rational epistemic strategies.

An important distinction between PE on knowledge and on properties such as justification, rationality and evidence concerns so-called 'ignorant high stakes' cases (Stanley, 2005, p. 5). These are cases in which the high stakes of falsely believing p are unbeknownst to the subject. For instance, imagine a high-stakes scenario in which there will be catastrophic consequences if Hannah doesn't pay her cheque by Monday, but she actually has no idea that that is so important. According to some knowledge encroachers like Stanley, in ignorant high stakes cases the high stakes undermine Hannah's knowledge. By contrast, many philosophers hold that whether one is justified in believing that p does not depend on features of the situation that are completely beyond one's reach. So in ignorant high stakes cases, practical factors that are beyond one's reach cannot affect justification. Philosophers who accept PE on knowledge, but argue that this is derivative from PE on justification, also deny that stakes affect knowledge in ignorant high stakes cases (Fantl & McGrath, 2009, Ch.4, §3.2).

C. Degrees of rational belief and rational credence.

Some philosophers have advanced forms of PE on the rationality of partial doxastic attitudes (degrees of belief and credence). Zoë Johnson King and Boris Babic (2020) argue that when no specific information is available to an agent, which rational prior credences she can rationally adopt can be determined by practical factors. In turn, these different priors will lead to different rational posterior credences after updating on new evidence. In a similar vein, Elizabeth Jackson and James Fritz (2021) argue that practical (more precisely, moral) considerations encroach on rational credence in ways similar to how moral considerations encroach on rational belief.

Modifying one's prior credences in the absence of new evidence, under the mere influence of practical factors, could be problematic. It is well recognised that this type of practical sensitivity could make one vulnerable to diachronic Dutch Books. An agent with practically sensitive credences may accept a certain series of bets, provided respectively before and after certain changes in the relevant practical factors, that collectively lead to a sure loss. Since Dutch Book arguments are standardly considered checkpoints for rational credence, it is doubtful whether practically sensitive credences could be ideally rational. Nonetheless, in Gao (2019), I argue that credence's sensitivity to practical factors could manifest *bounded rationality*, a kind of epistemic rationality that takes into account the subject's cognitive limitations and the environmental circumstances.

Sarah Moss (2018) defends PE on *probabilistic knowledge*, a kind of knowledge about probabilistic contents. Moss focuses on cases in which one forms credences about an individual based on statistical

information about his or her racial group. She argues that in these cases, even if moral features of credences do not determine whether such credences are justified, they are relevant for determining whether these credences can be knowledge. When we form opinions about a person, we are morally required to consider the possibility that she might be an exception to statistical generalisations. Probabilistic beliefs based on statistical evidence cannot rule out these relevant alternatives, and thus fall short of knowledge.

D. Relevant alternatives.

According to the relevant alternatives condition on knowledge and justification, ruling out relevant alternatives to p is necessary for knowing that p or justifiably believing that p . In this framework, practical considerations can be epistemically relevant in virtue of affecting the extent of alternatives that should be regarded as relevant (e.g., Gardiner 2020). The higher the stakes, the remoter the alternatives that should be considered and excluded in order to know p . Gardiner argues that moral considerations may also directly affect whether a specific error possibility counts as relevant. For two equally evidentially supported error possibilities, if one possibility has certain moral features that the other lacks, the former could be considered relevant while the latter does not. The idea that the range of relevant alternatives could be affected by practical factors was already anticipated by early proponents of relevant alternatives account such as Alvin Goldman (1976).

2. Types of practical factors affecting the epistemic status

Kinds of PE may also differ given which set of practical factors they take to affect a subject's epistemic status. The most important and debated practical factor has been the costs of error or stakes. Other factors have also been discussed in the literature. These include time pressure, availability of alternative actions, availability of further evidence, and salience of error possibilities.

A. Stakes.

Stakes are the practical factors most commonly considered in the literature on PE. The notion of stakes is borrowed from other domains such as economics and decision theory, where it typically refers to the potential values and costs that could ensue from a specific decision, such as a financial investment or a gamble on the outcome of a risky game. Most cases used to illustrate and support PE appeal to contrasts between low- and high-stakes scenarios. A typical slogan used to express the idea of PE is also formulated in terms of stakes: the higher the stakes, the harder it is to know (e.g., Anderson & Hawthorne, 2019). In most of its usages in this literature, stakes refer to potential harms, costs or other possible negative consequences. In particular, pragmatic encroachers focus on the costs that would ensue if a belief the subject would act upon turned out to be false. For instance, in the Bank cases, the stakes are the costs that Hannah would incur if she believed that the bank was open on Saturday and acted upon it, but that belief turned out to be false.

Many proponents of PE take the notion of 'stakes' to be intuitive and self-illuminating. However, 'stakes' may be far from a homogeneous notion. Efforts have been made to clarify which notion of stakes is relevant to PE (Gardiner, 2020; Worsnip, 2015). Anderson and Hawthorne (2019) explore several natural ways of precisifying stakes in a Bayesian framework (e.g., the maximal regret of a decision under some state) and argue that none of those readings is satisfactory. Anderson and Hawthorne also clarify the difference between 'stakes' and 'practical adequacy'. For any subject S and proposition p , S 's epistemic position with respect to p is *practically adequate* if and only if the gap between S 's actual epistemic position and S 's epistemic position conditional on p does not make a practical difference (i.e., it doesn't change

S 's ranking of preferences). Practical adequacy seems to be involved in typical arguments for PE. In standard cases discussed in the literature, practical adequacy matches with stakes. But, as Anderson and Hawthorne (2019) argue, practical adequacy could differ from any of the natural ways of precisifying stakes. For example, two cases that are alike with respect to stakes (e.g., same costs of error) may involve different sets of permissible alternative courses of action, which in turn may affect which actions are practically adequate.

B. Time pressure.

Time pressure or urgency could measure the costs of failing to act in due time due to the lack of a belief or a settled opinion on a certain matter. It can also be about the costs of missing out on having a true belief or the benefits of making up one's mind. While high stakes tend to raise the bar on the justification required for the relevant epistemic status, time pressure tends to lower that bar. Intuitively, other things being equal, the less time the subject has to make up her mind in a situation, the less difficult it is for her to meet the relevant epistemic status (Gerken, 2017; Shin, 2014). For example, compare a doctor who needs to diagnose a non-serious symptom of a patient in two minutes and another who has four months to do the same thing. Even though they currently have the same evidence, and both of them reach the same true conclusion, we would expect the latter to use the time she has to do more research and wind up with more evidence than her counterpart. As a consequence, the latter doctor will be reasonable not to immediately settle on a given opinion and to take longer to acquire knowledge or justified belief.

C. Availability of alternative actions.

Imagine that a wife believes that her husband has died in a war on the basis of the army's missing report. She knows that if she remarries and her husband were to come back, he would likely commit suicide upon finding her remarried. In one scenario, she and her children's survival require her to remarry a capable man very soon, so she doesn't have the option of not remarrying. In another scenario, she has the option of postponing the remarriage because she is economically independent. Intuitively, the wife in the former scenario may be in a position to know that her husband is dead, whereas in the latter she may not be. This seems to suggest that one's epistemic status can depend on the availability of alternative courses of action (see Gerken, 2017; Anderson and Hawthorne 2019).

D. Availability of evidence.

Some authors argue that whether further evidence about p is forthcoming and how much it costs to acquire further evidence could make a difference to what one ought to believe (Gerken, 2017; Schroeder, 2012). For instance, suppose that you have very good evidence that your friend will organise a party at her place this Sunday. But you know that she will confirm this later today. It seems reasonable to withhold your opinion about whether there will be a party until you receive her confirmation. By contrast, if you do not expect further evidence, it seems more reasonable to settle your mind about whether there will be a party. Similarly, we could imagine that the only way to confirm whether there is a party is to call your friend, but you know that she is very talkative: if you call, she will keep you on the phone for at least an hour. In this situation, the costs of acquiring further evidence may make it reasonable for you to settle on the belief that there will be a party without searching for further confirmation.

E. Salience of error possibility.

It is common to retract a knowledge claim when an error possibility becomes salient. For instance, you may take for granted that the bank will be open on Saturday and claim that you know that. But if your partner points out to you the possibility that banks change their hours, it may be rational for you to

retract your knowledge claim. As the above example makes it clear, here the relevant notion of salience is psychological, and it is often triggered by the conversational focus on an error possibility. A natural explanation of the knowledge-retraction phenomenon is that psychological salience has a knowledge-undermining effect (Hawthorne, 2004, Ch. 4). Strictly speaking, salience is not what we would normally consider a practical factor: it doesn't involve practical values or costs. Nonetheless, it is a non-epistemic factor.

3. Types of normativity affecting the epistemic status

A further orthogonal distinction between varieties of PE concerns the type of (non-epistemic) normative considerations that could affect one's epistemic status. While standard examples of PE concern prudential considerations, others involve different types of normative considerations (moral, social and legal).

A. *Prudential.*

Prudential considerations concern the well-being of people. More specifically, they concern what is beneficial or harmful for oneself. Most of the standard cases used to illustrate PE feature prudential considerations. In these cases, whether an agent knows p depends on whether it is prudential to act on p . More specifically, it depends on whether the personal costs of error for the subject are high. In addition to stakes, prudential considerations could also be involved in other practical factors discussed in §2, such as time pressure and, arguably, the availability of alternative actions and evidence.

B. *Moral.*

Moral encroachment concerns the impact of moral factors on the epistemic status of doxastic attitudes. Some cases of moral encroachment mirror standard PE cases, with the difference that prudential stakes are substituted by moral stakes (Pace 2011). In a moral variant of the Bank case, Hannah's failure to pay her check could lead to negative moral consequences, such as the imposition of a serious risk of harm on others.

Other prominent cases of moral encroachment are ones in which one believes that an individual possesses a negative trait based on good (even robust) statistical evidence, such as statistical data relative to the social group the individual belongs to. Paradigmatic examples are racial profiling and sexist profiling. For example, believing that a black passer-by is more likely to steal others' purses is morally objectionable, even when this possibility is supported by general statistics about race and crime.

A different type of case concerns beliefs about loved ones (e.g., friends and families). For example, a person who had struggled with alcohol and is trying to quit drinking goes to a reception, and someone spills wine on his shirt. When he returns home, his spouse smells the wine lingering on him and suspects that he has fallen off the wagon. In such a case, the spouse's belief may be inappropriate even though it is based on good non-statistical evidence (Basu & Schroeder, 2019).

C. *Social.*

We are entitled to expect that an agent satisfies a certain epistemic status due to the social role that that agent occupies (Goldberg, 2018). For example, a scientist is expected to keep updated about recent discoveries relevant to his research, and a family doctor is expected to be well-informed about standard medical journals for family medicine. Efforts have been made to defend the view that social expectations affect justification or other epistemic statuses from a feminist epistemology point of view (McKenna, 2020).

D. *Legal.*

In criminal trials, whether one is judged culpable depends on specific evidential standards of proof. However, whether an epistemic condition is sufficient to justify legal conviction may also be sensitive to specific practical concerns. Such concerns may include the consequences the defendant may face if convicted, incentives to obey the law, and the public perception of the justice system. Moss (2021) defends the idea that knowledge is sensitive to legal stakes. She argues that whether one knows that a defendant is guilty partially depends on factors such as the potential costs of conviction and acquittal. Erik Lillquist (2002) contends that the ‘beyond reasonable doubt’ standard adopted in criminal law is normally applied with a certain flexibility, and it should be so applied. More specifically, how high the standard should be varies with the nature of the crime and the character of the defendant.

References

- Anderson, C., & Hawthorne, J. (2019). Knowledge, Practical Adequacy, and Stakes. In *Oxford Studies in Epistemology* (Vol. 6, pp. 234–257). Oxford University Press.
- Basu, R., & Schroeder, M. (2019). Doxastic Wronging. In B. Kim & M. McGrath (Eds.), *Pragmatic Encroachment in Epistemology* (pp. 181–205). Routledge.
- Comesaña, J. (2013). Epistemic pragmatism. *Res Philosophica*, 90(2), 237–260.
- DeRose, K. (1992). Contextualism and knowledge attributions. *Philosophy and Phenomenological Research*, 52(4), 913–929.
- Fantl, J., & McGrath, M. (2009). *Knowledge in an Uncertain World*. Oxford University Press.
- Gao, J. (2019). Credal pragmatism. *Philosophical Studies*, 176(6), 1595–1617.
- Gardiner, G. (2020). Relevance and risk: how the relevant alternatives framework models the epistemology of risk. *Synthese*, 199(1–2), 481–511.
- Gerken, M. (2017). *On Folk Epistemology*. Oxford University Press.
- Goldberg, S. (2018). *To the Best of Our Knowledge: Social Expectations and Epistemic Normativity*. Oxford University Press.
- Goldman A I. (1976). Discrimination and perceptual knowledge. *The Journal of Philosophy*, 73(20), 771–791.
- Hawthorne, J. (2004). *Knowledge and Lotteries*. Oxford University Press.
- Hawthorne, J., & Stanley, J. (2008). Knowledge and action. *Journal of Philosophy*, 105(10), 571–590.
- Jackson, E., & Fritz, J. (2021). Belief, credence, and moral encroachment. *Synthese*, 199(1–2), 1387–1408.
- Johnson King, Z., & Babic, B. (2020). Moral obligation and epistemic risk. In *Oxford Studies in Normative Ethics* (Vol. 10, pp. 81–105). Oxford University Press.
- Lillquist, E. (2002). Recasting reasonable doubt: decision theory and the virtues of variability. *U.C. Davis Law Review*, 36, 85–179.
- McKenna, R. (2020). Feminist epistemology and pragmatic encroachment. In N. Ashton, M. Kusch, R. McKenna, & K. Sodoma (Eds.), *Social Epistemology and Relativism* (pp. 103–121). Routledge.
- Moss, S. (2018). *Probabilistic knowledge*. Oxford University Press.
- Moss, S. (2021). Pragmatic encroachment and legal proof. *Philosophical Issues*, 31(1), 258–279.
- Nagel, J. (2010). Epistemic anxiety and adaptive invariantism. *Philosophical Perspectives*, 24(1), 407–435.
- Schroeder, M. (2012). Stakes, withholding, and pragmatic encroachment on knowledge. *Philosophical Studies*, 160(2), 265–285.
- Shin, J. (2014). Time constraints and pragmatic encroachment on knowledge. *Episteme*, 11(2), 157–180.
- Sripada, C. S., & Stanley, J. (2012). Empirical tests of interest-relative invariantism. *Episteme*, 9(1), 3–26.
- Stanley, J. (2005). *Knowledge and Practical Interests*. Oxford University Press.
- Weatherston, B. (2012). Knowledge, bets and interests. In J. Brown & M. Gerken (Eds.), *Knowledge Ascriptions* (pp. 75–103). Oxford University Press.

Worsnip, A. (2015). Two kinds of stakes. *Pacific Philosophical Quarterly*, 96(3), 307–324.