

Testing What’s at Stake: Defending Stakes Effects for Testimony

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Abstract. This paper investigates whether practical interests affect knowledge attributions in cases of testimony. It is argued that stakes impact testimonial knowledge attributions by increasing or decreasing the requirements for hearers to trust speakers and thereby gain the epistemic right to acquire knowledge via testimony. Standard, i.e. invariantist, reductionism and non-reductionism fail to provide a plausible account of testimony that is stakes sensitive, while non-invariantist versions of both traditional accounts can remedy this deficiency. Support for this conceptual analysis of stakes is found through a review of the experimental philosophy literature on stakes effects on knowledge attribution. Finally, a diagnosis is offered for what is needed to provide a more robust defense of the paper’s primary claims in terms of future experimental study.

Keywords. Testimony, Stakes, Experimental Philosophy, Reductionism, Non-Reductionism.

In this paper, we demonstrate that stakes effects on testimony suggest that both invariantist forms of reductionism and non-reductionism are flawed accounts of testimonial knowledge. This negative project is balanced with a proposal to salvage reductionism and non-reductionism: we offer stakes-sensitive versions of these accounts and establish that these versions resolve our objections (Section 1). Empirical evidence supporting our account is found in the experimental philosophy literature, specifically the literature on stakes effects for knowledge. We consider significant cases featuring testimony, particularly BRIDGE, PINE NUTS, and IMPORTANT-UNIMPORTANT, and argue that they support the account laid out in Section 1 by revealing the inability of standard reductionism and non-reductionism to account for empirical work on stakes (Section 2). This paper’s subject, the conceptual and empirical study of stakes effects on testimony, has received limited discussion in the traditional and experimental philosophical literature.¹ This is unfortunate as a collaborative interaction between traditional and experimental philosophy grants the best understanding of testimony and stakes effects. Section 3, the paper’s conclusion, suggests ways in which experimental philosophers can begin to directly test stakes effects for testimony.

Section 1 - Testimony, Stakes, and Conceptual Mistakes: Challenging Standard Accounts of Testimony

1.1 The Significance of Stakes for Testimony

Until the late 1980s, philosophers investigating the conditions for knowledge attribution presumed that such conditions are determined by truth-relevant factors, those elements which are able to increase or lower the likelihood of the subject’s belief that *p* is true – e.g. justification, reliability, and evidence. In the last few decades, several researchers started to

inquire whether features of the conversational context and truth-irrelevant factors, such as the subject's error possibilities and other practical interests, might affect knowledge attributions as well. Contextualists, including Keith DeRose, Stewart Cohen, and David Lewis, argued for a controversial thesis: in certain conversational contexts, particularly in those where error possibilities have been raised, it may no longer be true that an individual knows, even if that individual knew in contexts when those error possibilities had not been raised.² Respondents to DeRose included proponents of interest-relative invariantism or subject-sensitive invariantism, such as Jeremy Fantl, John Hawthorne, Matthew McGrath, and Jason Stanley, who contended that practical interests matter as an epistemic fact about a situation.³ Whether we should attribute knowledge in a given situation is not based on the conversational context, as suggested by contextualists; rather, it depends upon facts about what is at stake for the subject and the attributor, i.e. their practical interests. Contrastivists argued that contextualism was right about the context-sensitivity of knowledge, but that what is relevant for each context is the appropriate contrast class of knowledge claims being considered in each case.⁴

This paper is indebted to the debate concerning stakes effects on knowledge and the experimental literature that succeeded it. Where this paper breaks from past analyses comes through focusing on a very specific issue: the impact of stakes on testimony. While our analysis may have import for the larger question of whether stakes impact knowledge attributions, we only address the local question of whether stakes affect attributions of testimonial knowledge. We will do so by comparing invariantist and non-invariantist theories in this paper. By calling a position 'non-invariantist', we simply mean that the position is a form of contextualism or contrastivism, and we allow the reader to consider whether specific forms of interest-relative invariantist or subject-sensitive invariantist are impacted by our arguments.

The following set of cases offers an example to expand analysis of stakes effects so as to include cases of testimonial knowledge. Consider whether James, the protagonist in the following vignettes, has knowledge.

FINE ART RESTORER LOW (FAR LOW)

James is an expert fine art restorer who works for the Metropolitan Museum of Art in New York. He plans to spend his holidays in Rome for the first time in his life, and once arriving in St. Peter's Square, James decides he wants to visit the Vatican Museums, one of the greatest Italian art collections. After he gets off the train in St. Peter Station, James realizes that taxi-drivers are going on strike; hence the roads are closed to traffic and he must walk to the museum. Thus, James asks for directions from Letizia, the first passerby who knows how to speak English. The lady replies: "The Vatican Museums are less than one mile away from here. You can just take Via di Porta Angelica, then make a left on Via Leone IV. Then, after a few steps, you'll see the long line of visitors of the Vatican Museums on your left." (*p*)

FINE ART RESTORER HIGH (FAR HIGH)

James is an expert fine art restorer who works for the Metropolitan Museum of Art in New York. He is in Rome for the first time in his life, and needs to get to the Vatican Museums immediately, since he is late for a job interview with the director who is selecting her successor for the next three years. Getting this position would definitely be a huge step forward in James' career. Once James arrives in St. Peter's Square, he realizes that taxi-drivers are going on strike; hence the roads are closed to traffic and he must walk to the museum. Thus, James asks for directions from Letizia, the first passerby who knows how to

speak English. The lady replies: “Vatican Museums are less than one mile away from here. You can just take Via di Porta Angelica, then make a left on Via Leone IV. Then, after a few steps, you’ll see the long line of visitors of the Vatican Museums on your left.” (*p*)

In FAR HIGH and FAR LOW, Letizia is a reliable source of testimonial knowledge: (i) Letizia’s belief concerning the directions to the Vatican Museums is true; (ii) her evidence is very high, high enough to satisfy requirements for knowledge in high stakes; (iii) she is a sincere, reliable testifier. To motivate the impact of stakes, FAR LOW has .85 probability that *p* represents James’ threshold for knowledge, whereas in FAR HIGH his threshold is .95, and in both cases Letizia has .96 evidence in support of her belief that *p*, and hence her evidence exceeds James’ threshold for knowledge (.85). To further motivate the significance of stakes, she is not sensitive to James’ practical interests nor does he let her know anything for the reason and urgency of his question. FAR LOW is a low-stakes situation, in which James has an ordinary and not urgent practical interest, whereas in FAR HIGH he is in high-stakes due to his tight schedule and need to make a good impression with the director. What seems problematic is that James’ different practical interests make a knowledge predication very easy in FAR LOW yet difficult in FAR HIGH. FAR HIGH establishes a high bar for James’s supposed knowledge—failure to find the museum means he could lose his chance to get the job. This failure undermines his possible knowledge and does not appear in the very mundane FAR LOW, where there is a minor harm if James fails to have knowledge. The key issue that emerges from these cases is whether stakes can affect knowledge attributions so that James in FAR HIGH lacks the very knowledge we may ascribe to him in FAR LOW. As we argue in the next section, what is central to testimonial knowledge attributions is the possibility for James to trust Letizia: specifically, whether James as the hearer is epistemically entitled to accept Letizia’s testimony as the speaker and acquire knowledge from her.⁵

1.2 How Stakes Undermines Reductionism and Non-Reductionism

Stakes effects undermine two of the standard accounts of testimony, reductionism and non-reductionism. To give a minimal definition of these views, reductionism requires that the hearer (hereafter, H) possess non-testimonial *evidence* to accept the speaker’s (hereafter, S) testimony. In other words, “reductionist testimonial knowledge is always the result of an inductive inference from [...] basic kinds of evidence that we get through perception, memory, etc” [Riggs (2009), p. 211]. Conversely, non-reductionism merely demands that H lack *defeaters* that count against S’s trustworthiness or the reliability of S’s testimony, in order for H to be in the position to accept the testimony.

The central issue when predicating testimonial knowledge is whether knowledge has been transmitted from the speaker to the hearer. Reductionist and non-reductionist accounts pose different requirements for the transmission of knowledge. According to non-reductionists, the absence of *defeaters* is sufficient for granting transmission of knowledge through testimony from S to H because H has an epistemic right to trust S, to believe what S says on the ground that S asserted so. In contrast, reductionists deny that H possesses such epistemic right, for it is just H’s non-testimonial *evidence* that allows H to believe S’s testimony.

Introducing the notion of an epistemic right to trust requires a couple of remarks. Firstly, the epistemic right is what enables a direct procedure for granting that S’s belief and its epistemic proprieties can be passed from S to H without any loss in terms of evidence and credence. If H has the epistemic right to trust S—or if H is epistemically entitled in trusting

—a person who knows some proposition p , then H acquires testimonial knowledge via direct transmission of belief and its epistemic proprieties from S. Secondly, notice that the epistemic right must be only “presumptive,” hence, it must be defeasible in appropriate circumstances. Any right, including an epistemic right, allows one to do something if we find ourselves in the conditions to exert it. For instance, Joseph has the right, as Ph.D. student at the University of Genoa, to receive a bursary on a monthly basis, unless he already does some other job in which he earns EUR500. The mere fact that there are conditions in which Joseph loses his right of receiving the bursary does not entail that he does not possess that right.

In determining whether or not James is epistemically entitled to accept Letizia’s testimony, of chief importance are his practical interests. In low stakes, epistemic entitlement is easy to achieve—lacking evidence that the speaker is untrustworthy or that her testimony is unreliable suffices to put one in the position to trust the interlocutor. Epistemic entitlement is far more difficult to achieve in high stakes, where the risk of following wrong directions would almost certainly lead James to miss the job interview. Despite the impact of stakes on knowledge attributions, the debate between reductionism and non-reductionism has arisen within an invariantist framework; thus, both views commonly assume that the standards for the attribution of knowledge to H based on S’s testimony are not affected by variations in non-epistemic factors, such as H’s practical interests.⁶ A few philosophers have recently discussed stakes and testimony, beginning with Freedman 2015a. While the resulting dialectic focused on Freedman’s connection between epistemic risk and emotional investment for testimonial stakes effects [Freedman 2015b, Kukla 2015, Fantl 2015], Freedman, Kukla, and Fantl have missed how stakes impact the central role of epistemic entitlement required for knowledge attribution, in addition to ignoring the significance of experimental work (apart from Kukla’s brief discussion [Kukla (2015), pg. 47-48]). But, as argue in the remainder of section 1, the viability of reductionism and non-reductionism to account for testimonial stakes effects relies upon whether the hearer, in different stakes situations, retains the epistemic right to believe the speaker’s words, thereby making the transmission of knowledge possible.

1.3 Non-reductionism and Practical Defeaters

Invariantist non-reductionists are in the position to maintain that in FAR LOW James is justified in accepting Letizia’s testimony, unless he has defeaters against her trustworthiness and the reliability of her testimony. In other words, James is epistemically entitled to trust her unless she gives cues of psychological or epistemic instability (e.g. she looks under effect of drugs), or she says something plainly wrong or unlikely (e.g. that Vatican Museums are in Naples). Consider now FAR HIGH, in which James has a practical urgent need to quickly get to the Vatican Museums. Here the epistemic features of the scenario do not change: Letizia provided the very same directions, indeed she is as reliable as she was in the previous case and James lacks any defeaters to doubt her testimony. Consequently, non-reductionists are committed to attribute knowledge to James, as they lack sensitivity to differences in non-epistemic factors.

Nevertheless, James lacks any epistemic right to trust Letizia due to his being in high-stakes: although she stopped walking and gave a cooperative and apt reply to his question, which are epistemic reasons to accept her testimony, James has to be at the job interview with the Director of the Vatican Museums soon and he cannot afford to take the wrong direction. In such circumstances, the extraordinary practical interests prevent James from acquiring testimonial knowledge via mere transmission. This is not to say that all things considered he cannot achieve knowledge; yet he lacks the epistemic right to trust her, for he

cannot rely on the fact that Letizia provided reliable testimony unless he acquires further evidence in support of such presumption and, hence, knowledge cannot be directly transmitted, due to H's extraordinary practical interests.

In order to account for James's lack of epistemic entitlement to believe Letizia in FAR HIGH, non-reductionists should endorse a non-invariantist account of testimonial knowledge. Assuming a non-invariantist non-reductionist framework allows one to claim that James's specific need to get to the interview constitutes a practical defeater, i.e. a particular non-epistemic condition that defeats the justified status of James's belief, in that it prevents him from being entitled to believe Letizia's testimony without looking for non-testimonial evidence. Happily, this view comes at no price for non-reductionists, because this non-invariantist inclusion neither undermines core non-reductionist principles, nor does it preclude epistemic defeaters from preventing the transmission of testimonial knowledge. In sum, practical defeaters simply constitute a further category of conditions under which it would be epistemically rational for non-invariantist non-reductionists to deny the hearer the epistemic right to trust the speaker that he possesses in ordinary circumstances.

1.4 Reductionism and non-testimonial evidence

As pointed out in 1.2, according to reductionists, the absence of defeaters does not guarantee that the hearer is justified in believing what the speaker says. Reductionists maintain that what makes one entitled to believe another's words is the positive non-testimonial evidence that the hearer is able to provide to support the speaker's utterances. However, at first glance, it seems as in FAR LOW – absent any defeaters for Letizia's testimony – James has the epistemic right to trust her even in absence of positive evidence of her trustworthiness, simply by virtue of his ordinary practical interests. Even though he wants to reach the Vatican Museums, he needs not rule out every possibility of epistemic and practical failure. His being in low stakes allows him to expect that Letizia will give a reliable testimony without demanding him to look for further evidence.

Therefore, some might think that reductionists are committed to deny James testimonial knowledge in FAR LOW, as he lacks non-testimonial evidence to justify Letizia's directions. There are three kinds of additional evidence which the reductionist might appeal to for evaluating whether James is in the position to gain knowledge via S's testimony: (i) evidence that directly confirms (or disconfirms) S's testimony, e.g. James can consult a map of Rome; (ii) S's past track record, e.g. James had a long-standing personal knowledge of Letizia; finally, (iii) evidence concerning S's trustworthiness and the reliability of the testimony [Gelfert (2014), p. 103]. To construct a stakes case for testimony, we must suppose that James lacks (i) and (ii). Therefore, if reductionists want to resist this objection, they should appeal to (iii). As a matter of fact, James lacks evidence pertaining to Letizia's trustworthiness (e.g. she does not wear a name tag or t-shirt from a tourist guide company) and the credibility of what she testifies (e.g. he does not know that her testimony is consistent with the best maps of Rome).⁷ The reductionist would note that James' selection of a speaker, a sober adult Roman, when combined with his ability to evaluate Letizia as a competent speaker of English language, provides him with enough non-testimonial evidence for satisfying the reductionist condition in FAR LOW. Additionally, the reductionist would point out that James is justified in accepting Letizia's testimony only if he makes sure that he is talking to a reliable interlocutor through an inductive inference – viz. an inference from perceptual information he receives about the reliability of Letizia's directions. According to reductionists, James might have inferred that Letizia's directions are reliable from reflecting that locals are generally trustworthy regarding directions and that Letizia appears to be a local. Hence, reductionists are in the position to explain why James is justified in believing

Letizia's testimony in low stakes.⁸

Granted that both reductionism and non-reductionism can explain how James acquires testimonial knowledge in FAR LOW, we need to determine whether reductionism fares better in high-stakes situations. One might think that, given the stricter requirements on testimonial knowledge posed by reductionists, it should be easier for them to accommodate cases like FAR HIGH, by requiring that James gains robust non-testimonial evidence to trust Letizia's directions. However, notice that this should not be the case: according to the invariantist form of reductionism we have so far considered, FAR LOW and FAR HIGH feature two epistemically identical scenarios in which the only variable element is James's practical interests. Once we admit that non-epistemic factors cannot affect the epistemic evaluation of the two situations, we must conclude that according to reductionists the inductive inference that justifies James in low stakes should provide him with sufficient evidence to acquire knowledge from Letizia even in high stakes. But this is problematic: it seems clear that James's relying on the mere inference that Letizia's directions should be accurate given that she appears to be a local is epistemically irresponsible when he has to make sure he gets to the museums in time for the job interview. In this scenario, the reductionist would require that James double-checks her directions, that he looks for street signs or that he buys a map of Rome, and we would not be willing to attribute knowledge to him unless he provides further evidence in support of the inductive inference he may have made. In other words, invariantist reductionists cannot appeal to the difference in James's practical interests in order to raise the threshold of non-testimonial evidence that he needs to possess if he wants to acquire testimonial knowledge.

In contrast, non-invariantist reductionism can certainly account for FAR HIGH. The only concession is that a non-epistemic factor, such as James's practical need to get to the important appointment on time, can raise his threshold for knowledge to the point that his inductive inference about Letizia's trustworthiness provides him with insufficient evidence to grant him testimonial knowledge. Further non-testimonial evidence of the kind we mentioned in the last paragraph, in conjunction with the evidence provided by the inference, could suffice to justify his testimonial belief in high stakes.

In summary, both invariantist non-reductionism and reductionism are unable to accommodate the difference between low-stakes and high-stakes situations. Non-reductionism is unreasonably concessive, in that it grants H the epistemic right to trust S in high-stake scenarios simply by virtue of H's lacking epistemic defeaters for the testimony. Reductionism is *potentially* better placed to provide the necessary requirements that grant transmission of testimonial knowledge in high-stakes, because it has something positive to say about the evidence one needs to possess. Unfortunately, reductionists cannot benefit from this advantage due to their invariantist assumptions, in that they commit themselves to the wrong claim that the same non-testimonial evidence that justifies H in low-stakes fails to allow him to acquire testimonial knowledge in high-stakes too. Non-invariantist versions of these theories can explain how practical interests affect attributions of testimonial knowledge. Non-invariantist non-reductionism pinpoints those high-stake situations in which H loses the epistemic right to trust S due to the presence of practical defeaters. Non-invariantist reductionism accounts for the difference between FAR LOW and FAR HIGH by conceding that H's practical interests make his inductive inference about S's trustworthiness insufficient to grant him testimonial knowledge. Further non-testimonial evidence, in conjunction with the evidence provided by the inference, could suffice to justify H's testimonial belief in high stakes. If so, non-invariantist reductionism could claim an advantage over non-invariantist non-reductionism, as the latter only tells us a negative story about how hearers lose the epistemic right to trust the speaker in high stake situations,

whereas the former has a positive explanation for how hearers acquire knowledge in high stake situations. This would be an extremely interesting point in favour of non-invariantist reductionism as a theory of testimonial knowledge, and an issue we intend to explore in future works.

Section 2-The Significance of Experimental Philosophy for Testimony and Stakes

2.1 Stakes, Experimental Philosophy, and Testimony

In this section we will show how the experimental philosophy literature supports the argument made in Section 1 by demonstrating the inability of invariantist forms of reductionism and non-reductionism to account for stakes effects. Our strategy mirrors Jessica Brown's defense of the Knowledge Norm of Practical Reasoning (2013): the stakes literature will be analyzed to consider evidence for the paper's earlier argument, which is possible through highlighting support from various studies, explaining why vignettes test issues beyond what the authors of the respective vignettes intended, and developing an original account for why the literature supports a non-invariantist approach to testimony. Adequate evidence for our conceptual argument against invariantist accounts of testimonial knowledge will be provided insofar as a stakes effect for the attribution of such knowledge is found in the experimental philosophy literature. If it is found that there is a significant difference in folk testimonial knowledge attributions between low and high stakes, our first target would be achieved. Indeed, such findings would challenge both invariantist theories of testimonial knowledge, which – as already argued – would predict a stable attribution of knowledge to H across cases featuring mere variations in H's practical interests. Additional evidence against forms of invariantism can be drawn from analyzing the specific set-up of each vignette in terms of the testimonial and/or non-testimonial evidence at H's disposal. The final step in addressing the empirical literature consists in showing that non-invariantist versions of reductionism and non-reductionism can easily explain the experimental findings.

2.2 What the Experimental Literature Reveals About Testimony and Stakes

Intriguingly, a number of studies on stakes effects in experimental philosophy rely on testimony as a central feature in various cases, particularly in the vignettes BRIDGE, PINE NUTS, and IMPORTANT-UNIMPORTANT⁹. In BRIDGE, the case presented in Feltz and Zarpentine (2010), John is a truck driver who, upon reaching a bridge over a small or large expanse, receives radio clearance to drive over the bridge. The radioperson reports that the rest of his fifteen-truck caravan has safely crossed over, and John reasons that he should be safe driving over in his truck.

PINE NUTS is a complex vignette with multiple instances of testimony.¹⁰ Hannah and her sister are eating at a Mongolian restaurant. Stakes are related to Hannah either being slightly or severely allergic to Mongolian Pine Nuts. Hannah is alerted to this fact by seeing something that looks like nuts on the dish and by her sister pointing out that Mongolian dishes are often served with Mongolian Pine Nuts. Hannah still eats the nuts anyways due to the fact that the menu does not state nuts are served with her dish.

IMPORTANT-UNIMPORTANT is introduced by Phelan (2014) and features the protagonist Kate asking a stranger whether she is on Main Street. She relies primarily on the testimony from the stranger—a point made explicit in the study—to direct her to the right street, in cases that are unimportant and life-threatening. Kate's evidence suggests that she has heard the stranger correctly, and she could gather more information *via* non-testimonial sources, but she does not: indeed, she acts merely upon the strangers' testimonies.

The experimental literature offers tepid support for invariantist reductionism beginning with the Feltz and Zarpentine (2010) study of BRIDGE. This study features a typical reductionist vignette in which it is made explicit that the protagonist “reasons upon” [Feltz and Zarpentine (2010), p. 206] the testimony provided by the radioperson and based on both the testimony and his inferential process concludes that he’s safe in driving over the bridge. If invariantist reductionism is correct, one should see a positive mean attribution of knowledge by participants in both low and high cases of BRIDGE –means were 3.83 and 3.4, respectively, which is a small pro-attitude by participants in favor of knowledge [p. 699]. Only a small, statistically-insignificant number of participants did not predicate knowledge in low- and high-stakes, 27% and 35%, respectively, even when John must drive over a thousand foot bridge [p. 694]. BRIDGE was only a single study, run one with one hundred and forty students, and it provides limited support for the invariantist reductionist. Sadly enough, we shall anticipate that the evidence provided by the results of the other studies largely preempts the findings of BRIDGE.

IMPORTANT-UNIMPORTANT are cases that specifically represent Kate the wandering walker exclusively relying on testimony, while she could rely on her vision, for example, to gather further evidence. Three elements allow us to claim that Phelan has inadvertently proposed a non-reductionist setting for this vignette. First, the studies note that Kate has no defeaters (no “special reason” to think her testifiers are mistaken). Second, Phelan is explicit that she has the possibility to search for further non-testimonial evidence, such as finding a map, but that she does not do so. Finally, he mentions that the reason why Kate does not need extra-evidence is because she forms the belief that she is on Main Street simply “on the basis of what the passerby tells her” [(2013), p. 7]. Across two studies participants were asked: “How confident should Kate be that she is on Main Street?” when she has received testimony from a general passerby (in the first study) and a tipsy but otherwise trustworthy drunk (in the second study).

Despite the question concerning confidence in evidence rather than knowledge attribution, the non-reductionist setting of this study allows us to draw significant conclusions for invariantist accounts of testimonial knowledge. As stated by Phelan’s *Bridge from Rational Confidence to Evidence (BRCE)*, “peoples’ implicit commitments about an agent’s evidence set *or* quality of evidence are reflected in their explicit intuitive judgments about how confident that agent ought to be in various propositions supported by that evidence” [p.5]. Asking about rational confidence in evidence when the only evidentiary source on which the protagonist relies is testimony from a passerby – and when she has no defeaters for that testimony – is a way of asking whether testimonial evidence alone is sufficient to convey knowledge in the given situation. In other words, it is a way of investigating the central claim of non-reductionism. The studies participants’ confidence between high and low stakes cases was statistically insignificant in *non-juxtaposed cases*, going from 5.32 (low)-4.5 (high) in the first study and from 4.29-4.09 in the second study (scale is 1-7, from 1 ‘not confident’ to 7 ‘very confident.’) This evidence of significant confidence predication on the sole basis of testimony suggests that invariantist reductionism is incorrect, because participants attribute confidence to Kate in the absence of non-testimonial evidence.

Suppose, for the sake argument, invariantist reductionists object that Phelan’s study fails because it does not measure whether participants are unconsciously making an inductive inference from the passerby’s testimony to the confidence she should have in what she hears. If this is the case, then participants are basing their confidence measurements on both their unconscious deliberations and the vignette. This argumentative line would undermine our claim that Phelan’s *non-juxtaposed cases* count against invariantist reductionism. However,

one of Phelan’s more interesting results was finding that *juxtaposed* cases resulted in a statistically-significant stakes effect, with the effect of importance in juxtaposed cases being more than 5 to 2.5 times (from study one to study two) greater than effect sizes when cases were not juxtaposed. Phelan believes that juxtaposing the cases should not make a difference. Likewise, invariantist reductionism and non-reductionism would consider both cases to require the same, non-stakes-sensitive account of knowledge predication: therefore, they would presumably predict that there should be no changes by listing two stakes cases instead of one. Instead, this seems to be the kind of evidence most appropriate to allow participants to see what is significant in each case; or, at least participants can now consider both cases and make a decision on their own, for they are in a superior epistemic position to evaluate the cases, as argued by Hansen (2014). We agree with Hansen that the best explanation of juxtaposition is a stakes effect whose significance has been confirmed by Hansen: participants’ best, most rational responses come when they can compare similar cases and consider the significant differences between the vignettes. Phelan’s finding a stakes effect in juxtaposed cases constitutes strong evidence against both traditional views on testimony, which are insensitive to the burden of practical interests on the attribution of testimonial knowledge. With evidence of a stakes effect and significant confidence in testimonial evidence, IMPORTANT-UNIMPORTANT disconfirms invariantist reductionism and non-reductionism.

In contrast, it should be evident that non-invariantist views can account for Phelan’s findings. Non-invariantist non-reductionism is not committed to grant knowledge to Kate in high-stakes, as the fact that her life depends on her being on Main Street by noon provides her with a practical defeater for the random passerby’s testimony. Non-invariantist reductionism can explain why Kate does not acquire knowledge from testimony in high-stakes by pointing out that her urgent practical needs require that her threshold for evidence in the situation be increased, so that she needs to acquire further non-testimonial evidence to back up the passerby’s words.

These findings disconfirm the weak argument in support of invariantist reductionism provided by BRIDGE and align with the analysis of the last study under consideration. In PINE NUTS, Hannah, the protagonist of whom the knowledge predication is made, has testimonial evidence from the menu that her dish does not contain pine nuts and she forms that belief “based on this” testimonial evidence [Sripada and Stanley (2012), p. 12]. However, she also appears to have counter-evidence for that testimony – namely, her visual seeming that there may be nuts on the noodles and her sister’s testimony that the dish may be topped with pine nuts. Sripada and Stanley did three tests on various versions of PINE NUTS, testing versions of the basic vignette, making the stakes implicit or explicit, and making Hannah and her sister unaware of Hannah’s allergy (which vitiates that vignette as a study of testimony—see the next paragraph for argument). Sripada and Stanley found that there was a stakes effect for the strength of evidence in all three versions as well as a stakes effect for knowledge attribution in all except the basic vignette. Again, this is significant because both invariantist forms of reductionism and non-reductionism would not predict the stakes effect in knowledge attribution. Notice too that the stakes effect for strength of evidence is significant, for it is a consideration of how much trust Hannah can put in the testimonial evidence provided by the menu and by her sister’s testimony as well as in the non-testimonial evidence provided by her visual seeming.

In order to determine whether or not this case succeeds in providing evidence against invariantist views, it is necessary to address two responses available to invariantists. First, they might point out that PINE NUTS merely provides evidence for a salience effect, not for a stakes effect. Buckwalter and Schaffer (2013) re-ran Stanley and Sripada’s PINE NUTS cases

with additional information in each vignette to emphasize the salience of stakes effects through details such as the kind of health problems Hannah will experience in low versus high and the genetic factors underlying various allergic reactions to pine nuts. Buckwalter and Schaffer find that salience, not stakes, is causing the difference in knowledge and evidence predication. These results can be questioned due to the amount and specificity of the salience details featured in the story. In both vignettes, at least half of the story features descriptions of the pine nuts allergies: thus, it would be hard not to find a salience effect when narrator cues dominate the communication of a vignette. A third study to confirm the salience effect, which is generated by the narrator describing how horrible it would be to have a pine nut allergy without the menu noting the use of pine nuts, reveals a non-testimony related salience effect. But this study utilized an adjusted version of PINE NUTS adapted from Sripada and Stanley that states Hannah and her sister cannot have knowledge of Hannah's pine nut allergies. Such an alteration eliminates the significance of testimonial and non-testimonial evidence in this study. If these women cannot know about Hannah's allergy, then there is no reason for them to care about trusting the menu nor should their visual evidence function as a defeater. Without a fourth study comparing the salience effect that is significant but not overplayed and overwhelming of stakes, it is difficult to see how Buckwalter and Schaffer's work helps the invariantist.

A second response open to invariantists would be to resist Sripada and Stanley's findings by denying that Hannah has knowledge in low-stakes. The rationale behind this strategy is that, once we admit that knowledge is to be predicated in low-stakes, invariantists are committed to grant knowledge in high-stakes, since the only difference between the two scenarios concerns non-epistemic factors. Therefore, in order to deny that Hannah has knowledge in low-stakes, both invariantist reductionist and non-reductionist have to question the nature of the evidence at her disposal. Invariantist non-reductionists should argue that she lacks knowledge due to the presence of visual and testimonial defeaters. Invariantist reductionists should point out that she fails to acquire knowledge because she lacks adequate non-testimonial evidence in support of the testimony provided by the menu, while she has significant evidence against it.

Both invariantist strategies are problematic for two reasons. First, these attempts clash with findings by Sripada and Stanley, which offers strong support for the claim that Hannah acquires knowledge from testimony in low-stakes (knowledge predications are above midline in two of the three studies, and just under midline in the third), as well as a stakes effect for knowledge and evidence. In light of these results, the invariantist's move looks like a stubborn attempt to bite the bullet. In contrast, they should provide stronger argument for why we ought to disregard Sripada and Stanley's results. Second, Sripada and Stanley's findings suggest that we ought to consider Hannah's visual seeming and her sister's testimony merely as *potential undefeated* defeaters: *Undefeated* defeaters because Hannah does not search for further evidence to confirm or disconfirm what the menu says about her dish; *Potential* defeaters because, interestingly enough for the purposes of this paper, their capacity to undermine the testimony of the menu is conditional upon Hannah's practical interests. In other words, it seems the consequences of Hannah's eating pine nuts in low-stakes are so harmless that she can disregard the potential defeaters – by thinking, for instance, that what looks like pine nuts may in fact be little pieces of garlic. On the contrary, the fact that in high-stakes eating pine nuts will cause her to die makes it irrational for her to overlook the defeaters. Thus, this case illustrates another interesting way in which practical interests can affect knowledge attributions, i.e. by activating or disabling potential epistemic defeaters depending on what's at stake for the epistemic subject in a given situation. But the fact that these defeaters do not activate in low-stakes undermines the

invariantist’s strategy: specifically, it undermines non-reductionists’ response because Hannah lacks defeaters. It also undermines reductionists’ response because – absent this counter-evidence – Hannah’s belief that her dish does not contain pine nuts might simply ground in an inductive inference from the testimony of the menu to the probability of finding pine nuts in the plate. Therefore, invariantists fail to provide conclusive reasons to overcome the results of the study and to contend that Hannah lacks knowledge in low-stakes.¹¹

Non-invariantist theories of testimonial knowledge can avoid this unwelcome conclusion by offering a different account of Hannah’s evidence against the information provided by the menu. Non-invariantist non-reductionists can contend that the potential undefeated defeaters get activated in high-stakes by Hannah’s risk to die if she eats pine nuts. On a non-invariantist non-reductionist view, the presence of undefeated defeaters undermines Hannah’s knowledge in high-stakes. Along similar lines, non-invariantist reductionists can argue that, since her life is at stake, it is rational that she takes her visual experience and her sister’s testimony into serious consideration and that she weighs such counter-evidence against the testimonial evidence provided by the menu. It is evident that the balance of reasons demands that she looks for further non-testimonial evidence, e.g. that she double-checks with the chefs that they did not put any pine nuts on her dish.

In an overview of the experimental philosophy stakes literature, empirical studies support our argument: both IMPORTANT-UNIMPORTANT and PINE NUTS undermines invariantism by evincing that these positions cannot account for stakes effects. Furthermore, IMPORTANT-UNIMPORTANT provides support beyond concerns with stakes effects. As mentioned, the study provides additional evidence against invariantist reductionism, because this view cannot account for significant knowledge predications in low stakes cases of non-reductionist vignettes. Another aspect of the study evinces that our account is correct: when Phelan asked participants to check all of the factors that should impact Kate’s confidence that she is on Main Street after being so testified, he found that forty-three percent of individuals chose the stakes-sensitive feature. This response presents a significant number of participants who find practical interests as having import for evidence, especially when most of the choices on the list of factors are defeaters (i.e. the quality of Kate’s hearing, her understanding of English, the emotional state of herself and the testifier, the reliability of past testifiers). The most linear interpretation of such a case is that the folk are sensitive to stakes exactly as argued in Section 1, according to which practical interests can affect predications of testimonial knowledge to the extent that, when in high stakes, the hearer might not be in a position to accept the very same testimony that she accepted in low stakes.

Section 3: Conclusion and Further Work

This paper has considered a topic of interest to traditional epistemology, stakes effects on attributions of testimonial knowledge, through combining conceptual analysis with evidence coming from experimental studies. Our work has shown that the stakes effect on testimony can be disentangled by a cooperative interaction between traditional and experimental philosophy.

In Section 1, we offered a conceptual argument showing that both invariantist reductionism and non-reductionism are committed to analyze high-stakes scenarios in the same way they conceive low-stake scenarios – i.e. to grant (or, to deny) H the epistemic right to trust S that he possesses (or, lacks) in low-stakes – in that both are insensitive to variance of practical interests. On the contrary, the non-invariantist accounts we introduced explain why in high-stakes H may lose the epistemic entitlement to believe S’s testimony due to practical defeaters or to the increase in the threshold of evidence for acquiring testimonial

knowledge. As presented in Section 2, the experimental literature, despite its design and ends towards defending various positions in the general stakes debate, provides cases, such as IMPORTANT-UNIMPORTANT and PINE NUTS, that undermine invariantist non-reductionism and reductionism, while being perfectly compatible with the proposed non-invariantist accounts.

In an attempt to commence discussion of stakes for testimony in the traditional and experimental literature, our paper has had to complete a number of tasks: reviewing ways testimony has already appeared in the stakes effect literature, presenting a novel response to stakes effects on testimony, and considering the successes of various studies to test testimony through particular vignettes. There are many subjects that could be tested, including philosophical definitions of testimony and the assumption, common to the testimony literature, that testimony and epistemic states can be transmitted from speakers to hearers. To test these issues would be fairly easy: like many of her colleagues Jennifer Lackey provides vivid thought experiments, i.e. the Creationist biology teacher [Lackey (2008), p. 48], that could easily be turned into vignettes to test intuitions concerning these issues. The same goes for basic intuitions behind reductionism and non-reductionism, as well as positions that do not fit easily into the reductionist-non-reductionist dichotomy. Returning to one of the great movements in traditional conceptual analysis, there are many Gettier cases that feature testimony, stretching from Gettier's coins case to Harman's assassination case. The possibility of testing testimony is nearly boundless. Our paper is a clarion to commence a study long delayed.¹²

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Notes

¹ We discuss Freedman (2015a), Kukla (2015), Freedman (2015b), and Fantl (2015), all of whom take up the question of stakes effects for testimony, at the end of section 1.2. Freedman’s 2015 paper began this dialogue on testimony and practical interests. The spirit of Freedman’s project is – broadly speaking – similar to ours, yet our paper distinguishes itself from Freedman’s in two main respects. First, Freedman puts forth a pragmatist account of testimonial justification meant to undermine both standard accounts of testimony, whereas we suggest that both reductionism and non-reductionism can accommodate the pragmatist worries by adopting a non-invariantist framework. Thus, while it might look like Freedman has a more positive project to offer, she is too quick in dismissing the traditional accounts of testimonial knowledge and we aim to show that we can salvage them. Second, we thoroughly review the experimental philosophy literature and find data that supports our position.

² See Cohen (1999) and DeRose (2009).

³ See Stanley (2005), Hawthorne (2004), and Fantl and McGrath (2007).

⁴ See Knobe and Schaffer (2012).

⁵ See section 1.2 for further considerations of epistemic entitlement.

⁶ Notice, for instance, that the entry on testimony in the Stanford Encyclopedia of Philosophy makes only a reference to the general stakes literature (Adler 2015), whereas the entry in the Internet Encyclopedia of Philosophy relegates the discussion of non-invariantist accounts of testimony to a short sub-section (Green 2008).

⁷ For further clarifications about the distinction between trustworthiness and reliability, as well as between trust and reliance, see McMyler (2011).

⁸ It seems plausible to the authors of this paper that when H has ordinary practical interests, he can acquire knowledge directly from S's words unless his background beliefs contrast with her testimony or he has clues of her untrustworthiness. The straightforward moral we could draw from these "non-reductionism friendly" considerations is that reductionists pose a too strict condition for the transmission of testimonial knowledge in low-stake cases like FAR LOW, for H appears to have the epistemic right to trust S before making any inductive inference from S's alleged trustworthiness to the acceptability of her testimony. However, our goal here is not that of contrasting the non-reductionist rendering of our example with the reductionist one. Rather, we aim to reformulate both the traditional accounts in such a way that each of them is in the position to account for the intuition that H's practical interests affect his standards for acquiring knowledge from S's testimony. For these reasons, in the remainder of this paper we set these considerations and our worries aside.

⁹ It is worth mentioning that also Bank cases feature testimony, since the driver has her friend's words, in addition to evidence that ranges from previous experiences at the bank to seeing a large line stretching outside the bank. In these cases testimony features as evidence for the driver, although the occurrence of testimony is extremely complex and, ultimately, unhelpful to assay invariantist views.

¹⁰ Pine Nuts first featured in Sripada and Stanley (2012), and retested in Buckwalter and Schaffer (2013).

¹¹ A referee proposed the following intriguing response. One might disagree with the idea that Hannah's visual seeming and her sister's testimony should constitute potential undefeated defeaters, and offer an alternative diagnosis of this case, according to which the counter-evidence provided by the defeaters is directly proportional to the testimonial evidence provided by the menu. On the one hand, if Hannah acquires *strong* testimonial evidence from the menu in low-stakes, there's no reason why her seeming and her sister's testimony should not provide significant counter-evidence against the menu. On the other, if the menu provides *weak* evidence in high stakes, so needs to be the evidence provided by Hannah's seeming and her sister's testimony. This alternative response is an interesting non-invariantist picture, which deserves further analysis. However, this view entails an account of pragmatic encroachment on evidence that we are not endorsing here. On the contrary, it seems more plausible to contend that stakes affect thresholds for knowledge, to the extent that the evidence Hannah acquires from the menu grants—or, fails to grant—her knowledge depending on what's at stake for her in the vignette. Denying pragmatic encroachment does not undermine Stanley and Sripada's results on the stakes effect for strength of evidence, because differences in folk attributions of evidence to Hannah can be explained by the activation of potential undefeated defeaters, as our argument suggests.

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