The Real Guide to Fake Barns: A Catalogue of Gifts for Your Epistemic Enemies

Tamar Szabó Gendler Cornell University tamar.gendler@cornell.edu (corresponding author)

John Hawthorne Rutgers University jphawtho@rci.rutgers.edu

Forthcoming: Philosophical Studies

|--|

For comments and encouragement, we are grateful to Stewart Cohen and Alvin Goldman. Special thanks are due to Agent Brown (Brian Weatherson) and Agent Causation (Jonathan Schaffer), who provided careful comments on an earlier draft of this memo.

The Real Guide to Fake Barns: A Catalogue of Gifts for Your Epistemic Enemies

Recently, we have come across a top-secret document from the Council of Intuition Adjudicators (CIA). The document reports a series of troubling developments, all stemming from efforts to exploit patented knowledge-prevention technology developed at the University of Michigan in the mid-1970s¹. Whereas traditional efforts in this area had focused on preventing knowledge by preventing belief—and hence had fallen afoul of Federal Belief Intervention (FBI) guidelines—this new generation of products is in full conformity with FBI regulations; just as neutron bombs kill while leaving buildings intact, these products prevent knowledge without affecting beliefs.

It had appeared, in the 1970s, that the effects of such weapons could be safely quarantined. Intuitions concerning their effects seemed relatively stable, and principled articulations of the circumstances under which they were effective seemed possible. But the recently discovered CIA document confirms the growing suspicion of many that such ease of containment was merely an illusion. Rather, it seems, to stop the deployment of such weapons we need to make appeal to some of the most dreaded resources in the CIA arsenal: challenging the reliability of certain widely-held intuitions about particular cases, or perhaps even by challenging the systematicity of intuitions in this realm as a whole.

Below, we reproduce the CIA document in full.

¹ Alvin Goldman, "Discrimination and Perceptual Knowledge." Journal of Philosophy LXXIII: 20 (November 18, 1976), pp. 771-791.

To: Council of Intuition Adjudicators (CIA) Epistemic Agents

From: Agent 11.18.1976

As all of you know, we have for many years been coming across various shady catalogues offering a wide range of products designed to prevent knowledge without preventing belief. But few of us had taken seriously the threat that they seem to pose.

Recently, however, we have undertaken a systematic exploration of these documents — and have come to a rather pessimistic conclusion: rather than following along principled lines, intuitions about these cases seem wildly unstable and case-dependent.

Below, we reproduce a number of original documents revealing this unsettling history.

1. Background

Until quite recently, most catalogues offered only products such as the following:

<u>Exhibit 1</u>: Cardboard Building Advertisement from *Let's Get Real* (a catalogue directed at real estate agents seeking to prevent competitors from knowing about various buildings in their neighborhoods). (Case codename "ORIGINAL BARN.")

Since their introduction in 1976, our cardboard buildings have set the "Goldman standard" for facsimile edifices. Widely lauded by philosophers around the world as highly effective knowledge-preventers, our patented constructions are perceptually indistinguishable from their actual-building counterparts, and are available in a wide range of styles, including the garden-variety "Ann's arbor," the widely-popularized "Arizona adobe" and—our latest—"Nouveau Brunswick."

Easily installed with tools available in any epistemologist's home, these facsimiles need only to be arranged in such a way that when someone approaches the target building, there will be a large number of replicas in the area. If the subject's eyes happen to fall on the real house (barn, etc.), they will form the belief that it is a house (barn, etc.)—but they won't know it!

All of our facsimile buildings have been subjected to the most rigorous thoughtexperimental testing, and meet or exceed industry standards for knowledgeprevention. Just to remind Agents of how this technology works, we ask them to recall the widely-circulated 1976 document produced by Secret Agent Goldman, who had just been assigned to the CIA's nascent pro-discrimination beat². Goldman describes an unclassified interaction between an Agent and his son, in which the Agent—code-named "Henry"—is identifying "various objects on the landscape as they come into view. 'That's a cow,' says Henry, 'That's a tractor,' 'That's a silo,' 'That's a barn.'" Agent Goldman continues: "Henry has no doubt about the identity of these objects: in particular, he has no doubt that the last-mentioned object is a barn, which indeed it is. Each of the identified objects has features characteristic of its type. Moreover, each object is fully in view. Henry has excellent eyesight, and he has enough time to look at them reasonably carefully, since there is little traffic to distract him." Secret Agent Goldman reports that "most of us would have little hesitation in saying...that Henry *knows* that the object is a barn" ("so long as," he adds, "we were not in a certain philosophical frame of mind").

But, he points out, this inclination can be sharply contrasted with "the inclination we would have if we were given some additional information....Suppose," Agent Goldman continues, that "we are told that, unknown to Henry, the district he has just entered is full of papier-mâché facsimiles of barns...[that] look from the road exactly like barns, but are really just facades...quite incapable of being used as barns...[but] so cleverly constructed that travelers invariably mistake them for barns." Under such circumstances, Goldman reports, we would be strongly inclined to withdraw the claim that Henry *knows* the object is a barn." (Goldman 1976, 772-3)³.

-

² See Goldman 1976 (op cit).

³ The technique of preventing *belief* by distracting the observer with a large number of facsimiles can, of course, be found much earlier—for instance, in the Irish folk-tale "Farmer's Tom and the

Most Agents accepted the thrust of Goldman's original diagnosis, *viz*: "S has perceptual knowledge if and only if not only does his perceptual mechanism produce true belief, but there are no relevant counterfactual situations in which the same belief would be produced via an equivalent percept and in which the belief would be false" (Goldman 1976, 786) – though it had long been clear that some modifications were required concerning the notion of "same belief." For what does is mean to say that the belief Henry expresses by "that's a barn" (Goldman 1976, 772 and *passim*) could (in a relevant counterfactual situation) have been false? Presumably, we do not wish to maintain that *that very barn* could, in a relevant counterfactual situation, have failed to be a barn. Nor even that *that very belief* could have, in a relevant counterfactual situation, involved a different (perhaps merely apparent) barn⁴. Rather, the idea seems to be that there is a relevant counterfactual situation in which *sufficiently similar belief* would have been false. It was widely agreed that all of this required no more than a charitable reading or, at most, a friendly amendment.

However, more intractable issues rapidly came to light. As with any technology, there was the danger that Goldman's innovation would fall into the hands of those who did not fully understand its mechanisms. And this is precisely what began to happen. But

L

Leprechaun." In that story, Tom meets a Leprechaun who eventually agrees to show him a gorse bush beneath which a treasure lies hidden. Poor Tom has no tool with him to use for digging, but he has a shovel back at home. Before setting off to retrieve the shovel, he carefully ties a red garter around the designated bush, and extracts from the Leprechaun a promise that the garter will not be removed. The Leprechaun keeps his promise. But...when Tom comes back, every gorse bush within sight has been adorned with an identical red garter, and poor Tom returns home no richer than when he set out. (The theme is also explored—with a nice Dutch Book twist—in Dr. Seuss's fable *The Sneetches*.) A more serious employment of this technique is the Danish population's decision during World War II to wear, *en masse*, the yellow star intended by Nazis as an identifying mark for Jews. All are vivid illustrations of the fact that we may well care about "if" only if "only if."

the process of adjudicating intuitions in response to these cases proved much more difficult that anyone had ever expected.

2. Your Friends Will Never Know

The first document to reach CIA hands was associated with the obviously outrageous "Your Friends Will Never Know You're Wearing a Diamond Ring" campaign.

Exhibit 2: Costume jewelry advertisement from *Treasures to Trinkets: Merchandise for the Modest*. (Case codename: "FRIENDS NEVER KNOW.")

Recently introduced in our widely-publicized "Your Friends Will Never Know You're Wearing a Diamond Ring" campaign, our costume jewelry collection offers you a way of preventing others from knowing that you are sporting some sort of valuable doo-dah. Just send us a photograph of your genuine gem, and we'll do the rest!

Our Diamond Ring Kit provides you with six phony diamond rings that look identical to your genuine rock. Slip them surreptitiously into your pocket, and whenever someone sees your ring, there will be lots of fakes in the area. Result? Even when their eyes chance upon it, your friends will not know you're wearing a diamond ring!

There was no doubt among our Agents that this kit did not work, and it took only a few minutes for them to articulate why⁵. In order to prevent an observer from knowing

⁴ One might try to finesse the problem by appealing to a notion of "same belief" where, for demonstrative ingredients, the sameness in question concerns something like (Kaplanian) character rather than (Kaplanian) content.

⁵ It is crucial to remember that here, as throughout, we are interested only in pairs of cases where (a) knowledge occurs in one case and is prevented in the other, and (b) the believer's subjective state is indistinguishable in the two cases: pairs where there is knowledge in the distracter-free case but where, arguably, there is no knowledge in the relevant-facsimile case, and where the knower/believer feels no difference in her degree of doubt or uncertainty in the two cases. Because we are interested in the *contrast* between our knowledge-attributions in two sorts of circumstances, we need to discount interference arising from the "certain philosophical frame of mind" that would lead us to hesitate in saying "that Henry *knows* that the object is a barn" (or that my friends know I am wearing a diamond ring) even in the distracter-free cases. And because it is a presumption of such cases that the observer's internal state is indistinguishable in the knowledge and non-knowledge cases (cf. the "Henry has no doubt" and "unknown to Henry" clauses in Goldman's original presentation), we need to discount interference arising from our

(of the actual ring) that "that's a diamond ring," it is not sufficient that there be facsimile diamond rings in the area; the facsimile rings need to be such that the observer is at serious risk of noticing them⁶.

But what sort of risk was at issue? Agents began considering cases like the following. Suppose that Always has only one ring—an authentic diamond that she never takes off—and suppose she walks around the mall surrounded by a phalanx of constantfake-ring-wearers. When the casual observer's gaze falls on Always, does he know that she is wearing a diamond ring? Most Agents agreed that he does not know: after all, the casual observer's gaze might easily have fallen on one of the fake-ring-wearers, producing in him a relevantly similar yet false belief. And if a phalanx of fake-ringwearers does the trick, most Agents agreed, so does a single constant-fake-ring wearing companion—call her Never. If Always walks around the Mall with Never, they contended, the casual observer whose gaze falls upon Always' finger does not know that she is wearing a diamond ring. As in ORIGINAL BARN, the salient proximity of an indistinguishable facsimile is sufficient to indict the casual observer's knowledge. ("FAKE-RING COMPANION")

tendency to ascribe to the observer feelings of doubt about the veridicality of the perceptual information available.

This is not to deny that there are interesting epistemic—and practical—issues associated with cases that do not satisfy these criteria. Fashion magazines often caution that there is no point buying a genuine Chanel watch if the rest of your outfit is off-the-rack; no one will think that the timepiece is authentic. Analogously, they point out, if the bulk of your wardrobe is bona fide upmarket, you can save money here and there by filling in with undetected facsimiles. This is useful advice. But the cases in question do not satisfy the constraints articulated above: the reason no one knows you are wearing a Chanel watch is that no one believes that you are. Since such cases rely on belief-interference, they fall under FBI and not CIA jurisdiction.

⁶ The question of what makes a risk "serious," has, of course been of long-standing interest to the CIA: a subcommittee has been established to explore the issues of danger and risk at play in this particular context: To what extent do they have epistemic ingredients? To what extent are they ascriber-dependent? What sort of notion of objective chance is at play?

Purveyors of facsimile rings quickly got wind of these CIA discussions, and several began offering product-lines in which fake-ring-sporting companions were dispatched to accompany genuine-gem-wearers on their daily outings. But the staffing costs associated with such strategies tended to be excessive, and the market soon foundered. Then, one summer, rumors of a new sort of technology reached CIA headquarters. Treasures-to-Trinkets had revamped its product line simply by changing the instructions that accompanied its original kits. Whereas the old kits instructed subscribers to slip the fakes surreptitiously into their pockets, the new kits instructed them to alternate which ring they wore on any given day. "Even if all the facsimiles are at home in your dresser drawer," the new kit advertised, "they'll never know you are wearing a diamond ring. After all, on any of the other six days, you would have been wearing one of the fakes." ("FAKE-RING COLLECTION")

Many Agents were of the opinion that FAKE-RING COLLECTION was as effective at preventing knowledge as FAKE-RING COMPANION. But with the new technology came new complications. Suppose someone – call her Sometimes – owns one of these new kits, and follows its instructions religiously. One day, when she happens to be wearing her genuine diamond, she goes to the mall with Always. The two walk around together, and both fall under the gaze of a casual observer. ("ALWAYS WITH SOMETIMES") If the casual observer would not know that Sometimes was wearing a diamond ring, then presumably she would not know that Always was. After all, there might be no intrinsic difference between the two rings, and minimal differences between their wearers' fingers, hands, clothes, etc. But if so, then something remarkable is going on. Can you really prevent a casual observer from knowing that someone is wearing a

diamond ring by walking around beside her, wearing a real diamond, with the habit of wearing fakes on other days⁷? Could epistemic contagion really be so easy?

Agents quickly realized that they were facing a new kind of potential epidemic⁸, and divided into three main groups:

- (1) Some insisted that no matter how similar Always and Sometimes are in appearance, the casual observer knows that one but not the other is wearing a diamond ring. Even if Always and Sometimes produce *qualitatively indistinguishable percepts*, even if their rings are *intrinsic duplicates*, still the casual observer would know of the one but not the other that it was a diamond. To many, this purported asymmetry seemed implausible, though its defenders remained steadfast⁹.
- (2) Others defended the view that Sometimes is epistemically infectious, maintaining that in ALWAYS WITH SOMETIMES, the casual observer does not know that *either one* is wearing a diamond ring. But their opponents worried that this would open the floodgates to excessively skeptical results. Suppose Never (who wears her fake ring daily), goes to the mall almost every day and sits on the bench in front the central

⁷ Remember the caveats offered in footnote 5.

⁸ Some proposed describing the new epidemic as follows. Whereas the ORIGINAL BARN and its descendents (FAKE-RING COMPANION and FAKE-RING COLLECTION) introduce the possibility of what we might call *primary infection*, ALWAYS WITH SOMETIMES introduces the possibility of what we might call *secondary infection*. Whereas primary infection requires that there be some relevant counterfactual situation in which an equivalent percept produces a false belief, secondary infection requires only that there be some relevant counterfactual situation in which an equivalent percept is accompanied by a failure to know. Some Agents found the distinction between primary and secondary infection to be a useful one; others maintained that so-called cases of secondary infection were just particularly virulent cases of primary infection.

⁹ One Agent offered the following suggestive analogy on their behalf. Consider a series of pairwise-indistinguishable color chips whose colors shift gradually from red to orange. Oscar starts on the left, examining the chips one pair at a time. Assume that Oscar knows of the leftmost chip that it is red, but that there is some red chip further down the line that he does *not* know is red (say, because he would easily confuse it with a chip that is, in fact, orange). If so, then at some point during his process of pairwise comparison, he knows that the chip on the left is red,

fountain at noon. Once a week, however, she stays home to mow the lawn. One day, Always goes to the mall and sits on the bench in front of the central fountain at noon. It happens to be the day that Never is at home. The casual observer's gaze falls upon Always' ring. Does he know that she is wearing a diamond? ("NEVER AT NOON")

Intuition suggests that he does, but the advocate of position (2) faces some pressure to say otherwise. After all, the defender of (2) has committed himself to saying that when Always walks around with Sometimes-in-her-genuine-ring, the casual observer does not know that either of them is wearing a diamond. Why should the fake rings in Sometimes' drawer indict the casual observer's knowledge in ALWAYS WITH SOMETIMES, but the fake ring on Never's finger not indict his knowledge in the NEVER AT NOON?

(3) A final group maintained that in FAKE RING COLLECTION, one does know that the ring-wearer sports a diamond ring and, correlatively, that in ALWAYS WITH SOMETIMES, one knows that both are wearing a diamond rings. They held that Sometimes' habit of wearing fake rings does not introduce—even in her own case—a relevant counterfactual situation in which an equivalent percept produces a false belief; in order for the potential defeaters to be strong enough to defeat knowledge, they maintained, the defeaters must, in general, be *spatially* proximate—and not merely temporally so¹⁰.

Advocates of (3) differed on what might explain this asymmetry. Some subscribed to a version of what they called the GAZE PRINCIPLE. According to that

but does not know that the chip on the right is—even though the percepts are indiscriminable, and both chips are red.

10

¹⁰ If temporal proximity were sufficient, they pointed out, then it would seem that we know anything at all only due to the absence of hyper-lucid dreams.

principle, candidate-defeaters are relevant in cases where we leave the world as it is, altering only the observer's perceptual orientation within it, and irrelevant in cases where we leave the observer's perceptual orientation as it is, altering features of the world around her. In the first sort of case, one might say, the defeaters are there, but the observer's gaze happens not to fall upon them; in the second sort of case, her gaze is there, but the defeaters on which it might have fallen happen not to be around. (Opponents objected that the principle was *ad hoc*, contending that there are plenty of cases where non-present but eminently possible fakes clearly do seem to destroy knowledge¹¹.)

Others subscribed to a version of what they called the LIVE-DANGER
PRINCIPLE: cases where candidate defeaters are relevant are cases where there is, on
that occasion, a real danger of mistake; cases where candidate-defeaters are irrelevant are
cases where there is, on that occasion, no real danger of a mistake. Suppose that Never
could easily have shown up at that Mall but that morning chose not to. At noon, I
approach the fountain. Intuitively, there is on that occasion no danger of my observing
Never and forming a false diamond belief. (This comports with general intuitions about
he absence or presence of danger. If someone considers planting a bomb but has chosen
not to, then I am not, later that day, in danger of being blown up.) Similarly, the story

_

¹¹ One Agent suggested that appealing to this principle was like trying to refute Berkeley by staring at a stone. Cf. Agent Goldman's original report: "How shall we specify alternative states of affairs that are candidates for being [relevant alternatives]?...[Clearly,] the object in the alternative state of affairs need not be identical with the actual object...[and some] alternative states of affairs [may] involve the same object but different properties... Sometimes, indeed, we may wish to allow non-actual possible objects. Otherwise the framework will be unable in principle to accommodate some of the skeptic's favorite alternatives, e.g. those involving demons" (Goldman 1976, 780).... "An adequate account of the term 'know' should make the temptations of skepticism comprehensible" (Goldman 1976, 790).

goes, when I approach Sometimes on her real ring day, there is, on that occasion, no danger of my gaze coming to fasten onto a fake ring. (Opponents objected that this was *ad hoc*. If I am driving by a real barn and the fakes are a few hundred yards away, then isn't there some sense in which there is at that moment no danger of my gaze falling on fake? It seemed quite unclear how to calibrate live danger so that lines are drawn where intuition suggests they ought to fall.)

3. The Contingencies of Risk

A call on the Citizens' Hotline alerted the CIA to an additional complicating factor that revealed diamond ring cases to have barely scratched the surface.

Exhibit Three: *Hotline recording* (Case codename: "FAKE BAR")

Unbeknownst to its patrons, Awful Alvin's Bar serves genuine gin six days per week – and an undetectable surrogate on Sundays. Tom goes out nearly every night; Dick drinks only after his seminar on Tuesdays; Harry is unpredictable but always spends Sundays at home with his family. The three of them gather at Awful Alvin's on Tuesday night, and each of them orders a gin and tonic. Oscar walks in and asks each one what he is drinking. "That's gin," each replies. Does Tom know that he's drinking gin? Does Dick? Does Harry? And does Oscar know that each is imbibing authentically?

FRIENDS NEVER KNOW had taught Agents that mere proximity of a fake is not sufficient for the fake's presence to prevent knowledge: the observer has to be at risk of noticing it. But what FAKE BAR drew attention to was that the risk of a fake being noticed by a particular observer may depend on certain highly contingent features of the observer, differences that do not, intuitively, make for a difference in his capacity to know the subject matter at hand. While his commitment to family time on Sunday may be laudable, it is odd to suppose that it has the additional benefit of enabling Harry, though not Tom, to know that a gin is being poured on some Tuesday evening, given that both

12

have the same perceptual exposure to the gin, and both have very similar discriminatory capacities.

Once the problem had been exposed, it was easy enough to find more illustrations. For example: Ed walks past a real barn. Fred drives by and briefly stops the car. There are fake barns within easy driving distance – indeed it is quite likely that Fred will soon come upon one – though there are no fake barns accessible by foot. There is thus no real risk of Ed observing a fake barn. Should we conclude that Ed knows that there is a barn there but Fred doesn't? Or again: Ike is shortsighted, Mike has excellent vision. There are fake barns in the area, perched on hilltops that can be observed by someone with acute eyesight. There is thus no real risk of Ike observing a fake barn, though a good chance of Mike doing so. Ike and Mike observe a real barn at fairly close range. Should we conclude that Ike but not Mike knows that there is a barn there?

Some Agents were happy to follow these cases where they seemed to lead, concluding that the knowledge-preventing capacity of fakes depends on the risk they induce of a subject's perceiving them. The walker knows; the driver doesn't. The short-sighted observer knows; the observer with 20-20 vision doesn't. Others balked. It is intolerable, they argued, to allow that slow speed and shortsightedness could yield epistemic dividends in this way. Perceptual risk, they maintained, is highly observer-sensitive – in ways that knowledge is not – so the two cannot go hand-in-hand.

A CIA subcommittee has been assigned to investigate this matter further.

4. Retention and Prevention

Meanwhile, additional documents gave rise to further complications.

<u>Exhibit Four</u>: Travel brochure for *Unpotemkin-on-Lethe: The Village Vacation She'll Never Remember* (Case codename: DAYTIME VOYAGE)

Want to send your Boss on an un-rememberable vacation? Try Unpotemkin: a floating village that wends its way up and down the Lethe River. Home to some of the loveliest barns in the world, Unpotemkin is certain to entrance your Boss with its architectural splendors.

Here is the sort of exciting postcard you can expect your Boss to write: "From my comfortable seat at the center of Unpotemkin village, I have a lovely view of the farm that lies at its northern tip. Even though I just arrived this morning, here are some things I already know: That's a tractor. That's a silo. That's a barn."

Later that afternoon, we will unmoor the village, and send it floating gently downstream. As Unpotemkin glides down the Lethe, it will pass through fake barn country, where the river's banks are strewn with high-quality Goldman-standard barn facsimiles. What an exciting moment! What your Boss wrote in her postcard isn't true anymore: she didn't know that was a barn! After all, her gaze might well have just fallen upon one of the many fakes.

Don't forget to tell all your office-mates about Unpotemkin-on-Lethe: the world's most un-rememberable vacation!

CIA Agents were quick to challenge the ad's claims. Most agreed that knowledge was not lost in the way the ad suggested. (Those who demurred tended to be the ones who had secretly purchased diamond ring kits to hide in their ex-wives' dressers...)

Many Agents thought the key issue was the relevance of collateral information about the past. Suppose we agree that in the morning, prior to entering fake barn country, Boss knows that there is a barn at the end of Unpotemkin Village. Even if we grant that fake barns in the area in the afternoon would prevent a first-time onlooker from acquiring knowledge, it is hard to see that fake barns would interfere with Boss's ability to retain her knowledge that a barn was there in the morning. Consider the barn located at location L. Assume that Boss knows in the afternoon that there was a barn at L in the morning, and assume further that Boss can reidentify location L. (The presence of fake barns on the bank in the afternoon would surely not impede such reidentification). Then, insofar as

Boss can know in the afternoon that, upon looking at location L, she is looking at the same object that she saw in the morning, it would seem that she can know in the afternoon that she is looking at a barn. Since the presence of fake barns on the shore would not seem to make any trouble for the reliability of beliefs of the form "that is the same object I saw yesterday," it would seem that Boss has, after all, the basis for knowing that there is a barn in front of her in location L, even when the banks are replete with fakes. The mistake is to suppose that when she looks at an Unpotemkin barn during the passage through fake barn country, the basis of her belief is merely the visual percept that the barn generates¹².

Not all Agents were satisfied. Suppose Holly sits down on a bench in front of a barn in the morning when there are no fakes in the area and forms the belief "that's a barn." Just before noon, several fake barns are erected just out of view. Later that afternoon, Molly arrives on the scene and joins Holly on the bench where she has been sitting all day. Molly looks at the real barn and forms the belief "that's a barn."

According to the analysis just presented, Holly but not Molly would know that she is looking at a barn – even though the two are seated side-by-side on the same bench, each having only seen a real barn, and each confronting the same risk of observing the newly-

_

¹² How does all this bear on Goldman's original dictum that "S has perceptual knowledge if and only if not only does his perceptual mechanism produce true belief, but there are no relevant counterfactual situations in which the same belief would be produced via an equivalent percept and in which the belief would be false" (Goldman 1976, 786)? For isn't this a case where we have knowledge that is arguably perceptual despite the fact that an equivalent percept produces a false belief in various nearby counterfactual situations? Some Agents insisted that owing to the import of collateral information, it is not true in this case that the perceptual mechanism produces the belief (in the relevant sense of 'produce'). Others suggested that some of the surroundings (in this case, those used to reidentify L) may here be considered crucial to the percept, in which case the counterfactual perceptions of fake barns would not generate equivalent percepts in the relevant sense.

constructed fakes that lie just beyond their range of sight. This, maintained the dissenters, is intuitively intolerable. The dispute remains unresolved.

5. The Price of Caution

For many years, cases confronted by the CIA were primarily concerned – like those above – with issues surrounding the notion of what makes a counterfactual situation relevant. Few had exploited the second main element in Goldman's original diagnosis – that of "equivalent percept¹³." But then the CIA began to come across documents like the following.

Exhibit Five: Travel brochure for *The Veldt Belt: A Place to Laugh about Animal Knowledge* (ANIMAL SAFARI)

Does your wise old Uncle Milton want to get back at his epistemically cautious cousin Isidore? If so, send them on one of our Veldt Belt excursions... So long as Isidore is reluctant to make judgments about the species to which a particular animal belongs while Milton is not, then Milton will know that he is seeing animals, while Isidore won't know he's seeing animals!

Even if Milton and Isidore never disagree about whether something is an animal—even if there is no nomically possible perceptual situation in which the two of them deliver different verdicts on whether an object presented is an animal—still, Milton will know that he is seeing animals, and Isidore will not know that he is seeing animals. Ha ha—the joke's on Izzie!

How does this fantastic safari work? Let me tell you how. In anticipation of Milton's visit, we will populate the veldt with numerous fake antelopes—and three real tigers. And then we will send Milton and Izzie out in one of our Jurassic jeeps...

Milton will look at one of the tigers, form the belief that it is a tiger, come to know that it is a tiger, and thereby come to know that he has seen an animal. But what about Milton's cautious cousin Izzie? He will look at one of the tigers, be reluctant to form the belief that it is a tiger, and instead merely form the belief that it is an animal. But now we've got him! The area is rife with fake animals—

,10

¹³ "S has perceptual knowledge if and only if not only does his perceptual mechanism produce true belief, but there are no relevant counterfactual situations in which the same belief would be produced *via an equivalent percept* and in which the belief would be false" (Goldman 1976, 786).

artificial antelopes on every apex! So Izzie will not know that he is seeing an animal – but Milton will... Isidore has paid the price of caution!

Agents condemned the case immediately, quickly pointing out its similarity to Agent Goldman's dachshund/wolf example. Suppose, proposed Goldman, that Oscar has a tendency to mistake wolves for dogs, and that he observes a dachshund in a field frequented by *canis lupus*. Seeing the dachshund, Oscar believes a dog to be present. ("DACHSHUND WOLF") Does he know that a dog is present? After all, he would (falsely) believe a dog to be present even if he were he merely to have seen one of the many wandering wolves. Goldman rejects this reasoning as follows:

If Oscar believes that a dog is present because of a certain way he is 'appeared to,' then this true belief fails to be knowledge if there is an alternative situation in which a non-dog produces the same belief by means of the same, or a very similar, appearance. But the wolf situation is not such an alternative....An alternative that disqualifies a true perceptual belief from being perceptual knowledge must be a 'perceptual equivalent' of the actual state of affairs. (Goldman 1976, 779).

He goes on to produce a refined account of the notion of "perceptual equivalence":

If the percept produced by the alternative state of affairs would not differ from the actual percept in any respect that is causally relevant to S's belief, this alternative situation is a perceptual equivalent for S of the actual situation....Consider now the dachshund-wolf case. The hypothetical percept produced by a wolf would differ from Oscar's actual percept of the dachshund in respects that are causally relevant to Oscar's judgment that a dog is present. Let me elaborate. There are various kinds of objects, rather different in shape, size, color, and texture, that would be classified by Oscar as a dog. He has a number of visual 'schemata', we might say, each with a distinctive set of features, such that any percept that 'matches' or 'fits' one of these schemata would elicit a 'dog' classification... Now although a dachshund and a wolf would each produce a dog-belief in Oscar, the percepts produced by these respective stimuli would differ in respects that are causally relevant to Oscar's forming a dog-belief. Since Oscar's dachshund schema includes such features as having an elongated, sausage-like shape, a smallish size, and droopy ears, these features of the percept are all causally relevant, when a dachshund is present, to Oscar's believing that a dog is present. (Goldman 1976, 782-3)

Most Agents agreed that analogous reasoning could be used to account for the intuition that Isidore knows he is seeing animals: presumably, the cautious cousin uses a variety of "visual templates" to decide whether something is an animal, and the visual template that triggers an animal belief in the case of a tiger differs from the one that would have been activated by the fake antelope. It is for this reason that we are inclined to dismiss the fake antelopes in ANIMAL SAFARI as irrelevant to Isidore's knowledge—even though he does not have the conceptual confidence to distinguish them by name. Caution does not carry that sort of epistemic cost.

But if the visual template analysis is correct, Agents pointed out, then if Isidore's template is sufficiently permissive, ANIMAL SAFARI *could* describe a case where Milton knows that he is seeing animals, whereas Isidore does not. If one of the schemata that Isidore uses in animal identification is satisfied both by antelope-shaped creatures and tiger-shaped creatures, then he will pay the price not of caution, but of indifference.

Similarly, they continued, suppose Agent Orange is insensitive to certain subtleties of shading whereas Colonel Mustard is not; there will be cases where Colonel Mustard will know that he is seeing a red piece of paper, whereas Agent Orange will not – even though Mustard and Orange never disagree about whether a sheet of paper is red and thus even though neither is more easily deceived, neither more reliable in redness verdicts, than the other. Suppose that the two are sitting side-by-side. In front of them is a piece of paper of the shade red-36, surrounded by pieces of white paper that have been illuminated to look as if they are of the shades red-32, red-34, and red-38. Casting their gazes on the red-36 sheet, Colonel Mustard and Agent Orange both form the judgment: there is a red piece of paper before me. But if the visual template analysis is correct,

Colonel Mustard knows that there is, whereas Agent Orange does not – even though it may be nomologically impossible for them ever to disagree in perceptual cases about whether something is red. On this picture, indifference brings ignorance of redness in its wake: the narrower the range of features that play a causal role in bringing about a perceptual belief, the wider its range of its relevant defeaters.

6. Apples and Oranges: The Search for Consistent Principles

But a dinner party the next week revealed that this could not be the full story.

Exhibit Six: Orange's Apple

The Association of Fruit Lovers meets for dinner at Agent Orange's house. In the middle of his dining room table sits a clear glass bowl. In the middle of the bowl sits a single real apple. Nestled around it are two fake oranges, a fake cantaloupe, three fake peaches, and two fake coconuts. (FRUIT BOWL)

Suppose a member of the Association casts her eyes upon the bowl. According to the Equivalent Percept Articles (EPA), she knows that she is seeing an apple. After all, she looks at the apple, forms the belief that it is an apple, and thereby—since there are no fake *apples* in the area—comes to know that that is an apple in the bowl before her. (Surely an apple no more resembles a cantaloupe than a dachshund resembles a *loup*.) And if she knows that there is an apple in the bowl, presumably she knows that there is a piece of real fruit in the bowl. But does she? The intuitions of many Agents suggested otherwise.

But now there was trouble: for FRUIT BOWL and ANIMAL SAFARI are,

Agents were quick to note, structurally similar. Indeed, the casual visitor in FRUIT

BOWL—who seems clearly *not* to know that there is a real piece of fruit before her—is

19

in the position of Uncle *Milton*—who seemed clearly to *know* that he had seen an animal in ANIMAL SAFARI. What could explain the difference?

One difference seemed immediately striking: the apple in FRUIT BOWL is surrounded by many different sorts of fake fruit, whereas the tiger in ANIMAL SAFARI is surrounded by only one sort of fake animal. Place the real apple in a bowl of fake bananas and surround the real tiger by fake giraffes, lions, and gazelles, and the intuitiongap begins to fade. But why should this matter?

Some Agents reasoned as follows. FRUIT BOWL is presented in such a way that there are a variety of fake fruits in the bowl: fake oranges, fake peaches, fake coconuts, and so on. Upon hearing that story, it seems reasonable to think that whoever placed such a wide assortment of fake fruits in the bowl could easily have placed fake apples there as well. In ANIMAL SAFARI, by contrast, the presence of fake antelopes does not in itself raise the specter of fake tigers could easily have been present too. Change the safari story to one in which the real tigers are surrounded by fake giraffes, fake lions, fake zebras and the like—and the specter looms large. Change the fruit bowl story to one in which the host has simply placed her apple on top of a pile of fake bananas, and the gap fades in the opposite direction.

Other agents were dissatisfied. They pointed out that this diagnosis depends upon appealing to the relevance of the possibility of a non-present fake apple producing a percept similar to that produced by the real apple. But, they pointed out, if one concedes that this is what prevents knowledge in FRUIT BOWL, then its analogue ought to prevent knowledge in NEVER AT NOON. After all, in that case too a fake could easily have been present that produces the same percept and belief. But only a minority of

Agents had conceded that knowledge was prevented by the Never's counterfactual presence at the fountain ¹⁴.

A problem had crystallized: How could one consistently maintain that knowledge was present in NEVER AT NOON, but absent in FRUIT BOWL? Some Agents suggested the following. In FRUIT BOWL, the reasonableness of the belief that there is a real apple depends upon certain false beliefs being uncorrected: if the observer in FRUIT BOWL were told that his beliefs about the apparent oranges, peaches, coconuts etc. were false, he could no longer reasonably believe that the apple was real. By contrast, the reasonableness of the belief in NEVER AT NOON does not depend upon certain false beliefs being uncorrected.

But, pointed out dissenters, this UNCORRECTED-FALSE-BELIEF PRINCIPLE runs afoul of the following intuition. Suppose the fruit is arranged in an opaque bowl, so when the observer enters the room, all he sees is the apple on top. Were he to take one step further, his gaze would fall upon the fake oranges and peaches etc., but from where he stands, all that is visible is the real apple. He thus has no uncorrected false beliefs about the other fruits. Still, contended these Agents, there is some inclination to say that he does not know in this case. After all, they pointed out, suppose that the opaque bowl contained fake *apples* instead. In that case we would surely say that he does not know

-

21

¹⁴ Or again: suppose someone buys a rose—call the rose Sharon. He faces a decision as to what to surround Sharon with in the vase: fake roses or real daisies. He tosses a coin and decides to surround it with real daisies. Oscar comes by and forms the belief of Sharon that it is a rose. But given the set-up of the story, there is a close world where a person in Oscar's situation would form the belief of various fake flowers in the vase that they were roses. This hardly seems to prevent Oscar from knowing that a rose is present in the actual world. Or consider a variation on ANIMAL SAFARI where safari organizers parachute in one real tiger, then flip a coin as to whether to populate the remainder of the veldt with (a) fake tigers, or (b) real antelopes. Uncle Milton is lucky enough to go on safari (b) – but he only pays attention to the tiger. Does he know that he has seen an animal?

that he is seeing an apple – by straightforward ORIGINAL BARN reasoning. Given this, it seems implausible to some to say that he knows he is seeing an apple when he sees only the single real apple perched atop the bowl of fake fruit. So, they contended, the difference between FRUIT BOWL and NEVER AT NOON cannot be fully explained by appeal to uncorrected actual false beliefs.

Agents agreed that it was a matter for further investigation¹⁵.

7. Time Change

Some months after the initial memo appeared, two further cases came to the attention of the CIA, both further destabilizing the apparent reliability of classic barn intuitions.

Exhibit Seven: Watch Out

You enter a room and ask someone the time. She replies truthfully and correctly, and she is extremely reliable. But your informant happens to be surrounded by a roomful of compulsive liars. Do you know what time it is?

Field studies by the CIA indicate that—with the exception of small pockets in the vicinity of Tucson—there is a tendency to ascribe knowledge in this case 16. But why

¹⁵ Some suggested that the right way to account for the opaque-bowl cases was by making appeal to something like the LIVE-DANGER PRINCIPLE in conjunction with the UNCORRECTED-FALSE-BELIEF PRINCIPLE, withholding knowledge when there is a live danger of the observer holding false beliefs on whose lack of correction the reasonableness of the candidate belief lies. Dissenters retorted by pointing out that this would result in widespread skepticism. ¹⁶ Matters may be different when that very individual is disposed to lie about similar subject matter. Agent Brown suggests the following case. "Sherlock Holmes is trying to determine the circumstances behind Body's mysterious death. He knows that Doctor Who, Lord How and Private Why witnessed the death. What he doesn't know, because it has never occurred to him to think about it, is that all three are pathological liars. Doctor Who will always tell a lie except when asked a 'Who?' question, Lord How lies except in answer to a 'How?' question and Private Why lies except in answer to a 'Why?' question. Holmes knows none of this, but being struck by a whim of fancy given their names, he decides to ask the Doctor who killed Body, the Lord how it was done, and Private why it was done. All three answer truthfully, and Holmes comes to believe them. Does Holmes know the who, how and why of Body's murder?" Here many

should there be any intuitive discrepancy between a case of testimony with liars in the area and a case of perception with fake barns in the area? Could the difference depend on the intentions of the distracters? It seems not: for suppose that instead of being surrounded by compulsive liars, your informant is surrounded by well-meaning truthtellers whose watches have stopped. Intuitions remain stably knowledge-supporting, even though the chance of having gotten misinformation remains high.

Some agents suggested the following diagnosis, a cousin to UNCORRECTED-FALSE-BELIEF PRINCIPLE. If I ask someone the time then my inclination to trust that person will not be – nor ought it to be – significantly affected by the information that certain other people in the area are liars (or have watches that have stopped). For the information that certain other people are liars (or have broken watches) gives me no especially good reason to think that the person I am talking to is a liar (or has a broken watch)¹⁷. My conditional credence that the person I am talking to is a liar on the information that certain other people in the area are liars ought not to be significantly higher than my credence that the person I am talking to is a liar. This is because, in general, the information that X is a liar does not tell me anything much about whether Y is a liar – and likewise with the other cases where we are inclined to attribute knowledge. By contrast, if you tell me that certain other barn-appearing things in the area are not in fact barns, this will give me at least some reason to think that the barn-appearing thing that I am looking at is not in fact a barn. My conditional credence that the thing I am looking at is a barn on the information that certain other barn-looking things in the area

informants were reluctant to classify any of Sherlock's testimonially-obtained beliefs as knowledge.

¹⁷ Insofar as one think this suggests a conspiracy or plague, one will be correspondingly reluctant to attribute knowledge.

are not barns *is* significantly lower than my credence that the barn-looking I am looking at is a barn – and likewise with other cases where we are inclined to withhold an attribution of knowledge.

Other Agents felt that a less abstract diagnosis was called for. They conjectured that our methods of epistemic evaluation for assessing knowledge based on testimony are likely to be structurally different – and perhaps more lenient – than our methods for assessing perceptual knowledge: the requirements for transmitting knowledge differ from the requirements for acquiring it¹⁸. Consider the following case, they suggested. Henry inspects a barn in fake-barn country and tells me: "that's a barn." In fact, Henry has done enough to discern that there is not a mere barn façade there: he has walked around inside, tapped on the walls, used a metal-detector to locate the nails, and so on. But all Henry tells me is "that's a barn." Throughout the area, Henry's cousins are looking at barn facades, and – without performing such inspections – blithely reporting to their companions "that's a barn." Intuitively, I know on the basis of Henry's testimony that that's a barn. But if I were told that there were many others in the area who were falsely believing and reporting that they were seeing barns, then my belief that Henry is seeing a real barn would no longer be reasonable. This appears to make trouble for the more abstract diagnosis. Further research seemed to be called for.

8. Ignorance and Experience

Deep in CIA archives, one further document was found.

_

¹⁸ Agent Causation points out the following important asymmetry: "Imputations of lying are *insulting* in ways that considerations of barn props are not. Thus we feel pragmatic pressure not to entertain possibilities of lying when we need not, which has no analogue in the barns case."

Exhibit Eight: The Ignorance Machine

Employing factive-stative technological innovations developed in clandestine laboratories in Oxford and New York¹⁹, we have discovered how to prevent individuals from being pleased that p. Here is the new top-secret product.

As the curfew tolls the knell of parting day, your epistemic enemy sets off down the garden path to (what he fails to realize is) fake tiger country. Upon arrival, he is fortunate enough to cast his gaze upon one of the few real tigers, burning brightly in the distance. After going on for a bit about symmetry and immortality, he adds in conclusion "I am pleased that there is a tiger in the area."

But, of course, he is not! For it turns out that 'is pleased that p' entails 'knows that p' (as do other factive predicates that describe emotional states). Since your enemy doesn't know that he is seeing a tiger, he isn't pleased that he's seeing a tiger – even though, as matter of fact, he is! What poetic justice!

Many Agents immediately condemned this product as illegitimate. Two possible diagnoses: (a) despite the impressive array of considerations in its favor, the fashionable view concerning factive mental predicates is incorrect; (b) the concept of knowledge, prior to its being fashioned and molded by certain philosophical traditions, never offered any stable negative verdict in the original fake barn case²⁰.

The CIA hereby requests a grant of \$10 million to examine these possibilities in greater detail.

_

¹⁹ Cf. Timothy Williamson, *Knowledge and its Limits* (Oxford University Press, 2000) (chapter 1), drawing on ideas put forth in Peter Unger's *Ignorance* (Oxford University Press, 1975).

²⁰ An alternative explanation, here and elsewhere, is that the variations in response are due to the context-dependency of "know." Though many stylish Agents have embraced this mode of explanation, conservatives have resisted. Those adopting this kind of strategy face the additional task of specifying which of the disputes described above represent cases of genuine disagreement among Agents, and which represent cases where Agents are merely talking past one another.