WORKING DRAFT [January 2019] – Comments welcome

Levelling counterfactual scepticism

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In this paper, we develop a novel response to counterfactual scepticism, the thesis that most ordinary counterfactual claims are false. In the process we aim to shed light on the relationship between debates in the philosophy of science and debates concerning the semantics and pragmatics of counterfactuals. We argue that science is concerned with many domains of inquiry, each with its own characteristic entities and regularities; moreover, statements of scientific law often include an implicit ceteris paribus clause that restricts the scope of the regularity to circumstances that are 'fitting' to the domain in question. This observation reveals a way of responding to scepticism while, at the same time, doing justice both to the role of counterfactuals in science and to the complexities inherent in ordinary counterfactual discourse and reasoning.

0. Introduction

Counterfactual scepticism, the thesis that most ordinary counterfactuals are false, has received a fair amount of attention recently. The discussion of counterfactual scepticism and how one should react to it, either by resisting it somehow or by accepting it and living with the consequences, yields insights into the nature and utility of counterfactuals and counterfactual reasoning.

In this paper, we present a novel response to counterfactual scepticism. Our proposal is motivated and informed by considerations from the philosophy of science, as well as by considerations of the sort primarily discussed in the literature on the semantics and pragmatics of counterfactuals. By bringing together insights from these two literatures we arrive at an attractive response to counterfactual scepticism that sheds light on both the semantics of counterfactuals and the role counterfactual reasoning plays in scientific inquiry.

1. The Road to Counterfactual Scepticism

The most prominent defender of counterfactual scepticism is Alan Hájek. The following line of argument for scepticism is substantially Hájek's (ms). Consider the following statement:

> (1a) Were you to drop that glass, it would shatter.

Ordinary speakers would certainly be inclined to think that 1a is true (at least on the understanding that the glass is fragile, and that it would be dropped from a considerable height onto a hard floor). Or consider another example from biology:

> (2a) Were two individuals of some species to mate, the offspring would receive only one allele per trait from each parent.

2a invokes Mendel's Law of Segregation. We (and biologists for that matter) are inclined to accept 2a as true.

Or consider 3a uttered by a group of friends who were sorry that Alice was not at a party:

> (3a) Were Alice to come to the party, it would be fun.

Many would again be inclined to accept 3a (on the understanding that Alice is generally very

personable and fun-loving).[1]

Nevertheless, a knowledgeable speaker can think of scenarios in which the antecedent of these counterfactuals seems to hold yet the consequent does not. For instance, the laws of statistical mechanics allow that there is some possible microstate corresponding to the glass being dropped such that it does not fall and shatter but rather takes a different trajectory and lands on a soft surface. If this happened, the glass would have been dropped and yet not have shattered. Even under conditions conducive to ordinarily successful mating, certain biological irregularities may be such that an organism does not inherit one allele from each parent for some trait. In the case of the party, the possibilities are more mundane still: there might have been a house fire or a plumbing problem, such that the party, even with Alice's presence, was not fun.

That is to say, speakers are inclined to concede, *at least when pressed*, that the following statements are true:

(1b) Were you to drop that glass, it *might not* shatter.

(2b) Were two individuals of some species to successfully mate, the offspring *might not* receive only one allele per trait from each parent.

(3b) Were Alice to come to the party, it *might not* have been fun.

[1] The glass example is due to Hájek (ms). The biology example appears in discussions of laws in the special sciences (see Rosenberg & McShea 2008). The example involving Alice's attendence at the party is much discussed in the literature on indicative and counterfactual conditionals.

What is more, the truth of a might-not statement seems to imply that the corresponding would-counterfactual is false. If 1b is true, then it seems that 1a is false. Yet, without prompting, speakers tend to utter these would-counterfactuals. That is the tension: why affirm the would-counterfactual if one would, if pressed, concede the existence of possibilities in which the antecedent holds but the consequent does not?

Hájek upholds the might-not counterfactuals in the face of this tension. Hájek suggests that whenever a might-not counterfactual is true, the corresponding would-counterfactual is false.

The final component of Hájek's case is an argument that these possibilities that make would-counterfactuals false are *ubiquitous.* Consider a simple case involving a coin toss (where the outcome of the coin toss is stochastic).

(4a) Were you to toss that coin, it *would* come up heads.

(4b) Were you to toss that coin, it *might not* come up heads.

If the coin toss is genuinely stochastic, 4a rings false (the coin's landing heads is just *one* of the possible outcomes) while 4b rings true (it might land tails!).

Hájek then makes an interesting move. He notes that although the coin-toss case invites the idea that the coin is fair, the same argument goes through even if the coin is heavily biased; even if the probability of its landing heads if tossed is .99, its landing tails is still a genuine possibility, so 4a

is false and 4b is true.

An overwhelming reason to think that a process is stochastic would be if its dynamics are genuinely *chancy* or *indeterministic*. A system is indeterministic just in case the state of the system at a time plus the laws of nature do not determine subsequent states of the system. If the coin toss is indeterministic then there will be multiple subsequent states of the system (landing heads and landing tails) that are compatible with the coin being tossed.

Stochasticity can also arise in a deterministic setting. In the coin-toss case, we might think of the stochasticity as arising from treating the antecedent as picking out a *class* of toss events, where these tosses differ along parameters like momentum, velocity, etc. Hájek refers to these as *unspecific* antecedents. Understood in this way, the coin case is, again, stochastic; some ways of tossing the coin lead to its landing heads and others lead to its landing tails.

Hájek argues that, once we recognise this about coin tosses, we should recognise that nearly every case is similarly stochastic, either because the relevant process is not deterministic, or because the relevant antecedents are unspecific, in Hájek's sense. So for almost all counterfactuals, there is a possibility, however unlikely or remarkable, in which the antecedent holds and in which the consequent does not. This, combined with the claim that whenever a might-not counterfactual is true the corresponding would-counterfactual is false, leads Hájek to claim that most counterfactuals are false.

2. Our Proposal in Outline

In this section, we outline our response to counterfactual scepticism. In subsequent sections, we spell out the proposal in more detail, compare it to rival responses, and point to some of its important features.

We propose that when interpreting counterfactual statements and thoughts we implicitly appeal to a *domain* of scientific inquiry, where this domain marks out both a *level* or grain of scientific inquiry and a *scope* for the inquiry. One domain, for instance, is fundamental physics, taken to be the finest grain of inquiry and of universal scope. Another domain is human psychology, where the grain and scope concern human minds. A narrower domain still is the domain of, say, the social psychology of groups involving Alice. Indeed, there are a multitude of relatively insignificant 'homely' scientific domains, such as my sleeping patterns, or your behaviour in response to alcohol, or the promptness of service at a particular café. The more established and significant the scientific domain, the more its level and scope are commonly recognised and agreed upon. More on this later.

Depending on the implied domain of scientific inquiry, the antecedent of a counterfactual statement is interpreted differently: it concerns an entity within the domain in question, subject to an implicit 'fitting circumstances' clause tied to that domain. For instance, we propose that statements like 1a are best understood as expressing a proposition along the lines of 1s.

(1s) Were you to drop that glass *under fitting circumstances*, it would shatter.

That is, depending on the domain of inquiry (which is here at least partly determined by the terms 'glass' and 'shatter'), the antecedent is understood as requiring that circumstances that are fitting to the domain hold. On one reading (which we elaborate in the next section), the *fitting circumstances* amount, roughly, to ideal conditions in which the regularity or regularities pertinent to the domain in question operate(s) in isolation, free from 'interfering' forces. When we are interested in the physical properties and mechanics of everyday objects like fragile glasses, for instance, certain physical microstates that interrupt macro-object dynamics count as *interferences*; these events are excluded in the antecedent, and do not therefore confound the relevant regularity.

If 1a were rather expressed in a different setting, within the context of a statistical mechanics lecture, for instance, it might rather be interpreted, despite the strong association between the wording and macro-level physics, as expressing a proposition along the lines of 1s*.

(1s*) Were you to drop that glass *under fitting circumstances*, it would shatter.

In this case, very different things will count as interferences, excluded by the fitting circumstances clause. Statistical mechanics concerns all possible microstates, and as such, no particular physically possible microstate would count as an interference within that domain of inquiry.[2]

If we are right, interpreting a counterfactual requires identifying a domain of scientific inquiry, which will make a difference to the content of the antecedent. This means that the *truth conditions*

[2] At the most fundamental level of inquiry the fitting circumstances clause may simply be vacuous in that no possible event or sequence of events counts as an interference.

of counterfactual claims depend on the pertinent domain of scientific inquiry. In turn, the truth *value* of counterfactuals depends on what *lawful regularities* hold within that domain. Recall that we take 'science' here to mean the systematic description of the world that is the purview of specialist scientists, as well as that practiced by the common person in describing everyday, homely phenomena (the *extra special sciences*, so to speak).

One might anticipate how our proposal yields a response to counterfactual scepticism. As noted, for the domain of scientific inquiry ordinarily prompted by 1a, namely macro-level physics, the possibilities that supposedly threaten its truth do not arise in fitting circumstances. That is, the threatening possibilities are not ones that pertain to ordinary objects under the conditions that macro-level physics illuminates. So those possibilities are not really possibilities at which the antecedent, understood as we propose, is satisfied, and thus do not threaten the truth of 1a. Similarly for 2a and 3a. In the former case, the relevant domain of scientific inquiry involves biological individuals subject to the lawful regularities, involving sexual reproduction, inheritance, etc., of ordinary macro-biology. As such, circumstances involving, say, aberrant recombination of alleles, despite being well understood and of interest within the domain of chemistry, or even microbiology, are not fitting. In the case of 3a, the relevant domain of scientific inquiry is plausibly one concerning Alice's impact on others in ordinary social milieu. Here, circumstances in which the party is ruined by a house fire or a plumbing problem, are not fitting, despite, perhaps, being relatively common events. This serves to highlight one point regarding fitting circumstances that will come up again in the next section: they are not necessarily identified by their high probability (although high probability remains one candidate for classifying a circumstance as fitting).

Part of the puzzle spelled out earlier is that it seems reasonable for speakers to reconsider accepting a would-counterfactual claim when it is pointed out that there are possibilities in which the antecedent holds and the consequent does not.[3] We suggest that what is going on in these cases is that the interpreter is prompted to entertain a subtle shift in scientific domain. Consider again the the dropped glass case. If one were to shift one's domain (in this case level and scope) of scientific inquiry from macro-level physics to statistical mechanics (as one might be prompted to do to match the perspective of a persuasive interlocutor), the glass itself is conceived of differently and so too are the fitting circumstances: less-familiar possibilities for the trajectory of the glass may no longer count as interferences.

In other cases, stochasticity is important within the relevant domain of inquiry. For example, 4s, the interpretation of the statement 4a we propose, is false:

(4s) Were you to toss that coin *under fitting circumstances*, it *would* come up heads.

The coin *might not* land heads according to the chancy lawful regularity pertinent to devices like coin tosses, so 4s is false; that is, even in the absence of interferences (such as the coin vaporising in mid-air), the coin *might not* land heads.

[3] This is commonly accepted wisdom regarding ordinary usage of counterfactuals; see, e.g., K. Lewis (2016) for discussion of the conversational dynamics. We predict, however, that speakers may sometimes be more reluctant to concede the falsity of an asserted would counterfactual than is generally appreciated. This point is elaborated in section 5.

In summary, we propose that a statement like 'if A were true then C would be true' must be interpreted with respect to some domain of inquiry *i*, and is accordingly represented as '$A_i \Box\!\!\rightarrow C$', where A_i is an interpretation of the antecedent as involving entities and fitting circumstances characteristic of domain *i*, and where the *box arrow,* $\Box\!\!\rightarrow$, represents counterfactual dependence.

Since our proposal concerns the correct interpretation of the antecednent and not the interpretation, as it were, of the box arrow, it can be plugged into a wide range of accounts of the semantics of counterfactuals. For instance, our proposal can be used to augment the strict-conditional analysis of counterfactuals according to which $P \Box\!\!\rightarrow Q$ is true just in case all P worlds are Q worlds. Accordingly, $P \Box\!\!\rightarrow Q$ is true just in case $\Box(P \supset Q)$ is true. Augmenting this view in light of our proposal involves understanding a statement of the form 'if A were true then C would be true', interpreted with respect to domain of inquiry *i,* as equivalent to $\Box(A_i \supset C)$. Our proposal can also serve to augment other accounts of counterfactuals like the popular closest worlds account of counterfactuals drawn from the work of Lewis (1973) and Stalnaker (1968), Kratzer-style (2012) modal semantics for counterfactuals, or causal-modelling-based semantics recently analysed by Briggs (2012) and Santorio (forthcoming). This adaptablility raises interesting questions: Which semantics for the box-arrow fits best with our proposal? And what effect does our proposal have on the debate about which of these accounts is correct? We intend to explore these issues in future work. For the purposes of this paper, the reader can simply plug in their favourite theory of the semantics of the box-arrow to our proposal.

We should also mention that we are assuming the usual characterization of might-not-counterfactuals, as the duals of would-counterfactuals. That is, $P \Diamond\!\!\rightarrow \neg Q$ entails $\neg(P \Box\!\!\rightarrow Q)$. On

our proposal, the statement 'If A were true, C might *not* be true', interpreted with respect to domain *i*, is represented as $A_i \Diamond\!\!\rightarrow \neg C$. This entails that the statement 'If A were true then C would be true', also interpreted with respect to domain *i*, is false; that is $\neg(A_i \Box\!\!\rightarrow C)$.

3. Counterfactuals vis-à-vis Scientific Claims

With the help of our proposal, we can resist the sceptic's conclusion. All else being equal, it is better to preserve consistency with ordinary intuitions about which statements are true and which are false. But one might worry, in light of Hájek's argument, that all else is very far from equal and that we give up something important to avoid scepticism. In particular, one might worry that our analysis of counterfactuals is less *objective* than is required, since, on our proposal, the content of counterfactual statements is tied to domains of inquiry.

Hájek argues, persuasively, that support from science is an important desideratum for an account of counterfactuals. The general idea is well expressed by Kutach (2005): 'What makes counterfactuals especially suitable for science is that the truth of counterfactuals depends largely on the general patterns that science aims to describe.'[4] Others go further in claiming that a *defining feature* of the general patterns that science aims to describe – what makes these patterns or regularities lawful – is precisely their stability across counterfactual situations (see, e.g., Lange 2000). In either case, there is plausibly a tight connection between counterfactual dependence and the regularities science aims to describe.[5] So far we agree with Hájek.

[4] This quote appears in Hájek.
[5] For these naturalistic reasons, we will not address proposals in the literature that appeal to non-natural primitive metaphysical facts about what would have happened in various counterfactual

We part ways concerning the implications of this general approach. According to Hájek, the 'widespread falsehood [of would-counterfactual claims] is what one gets in a chancy world, as science teaches us that ours is'. But we contend that science does not teach us that the world is chancy *for all domains (levels and scopes) of description*, and thus we do not accept the widespread falsehood of would-counterfactual claims. In what follows we support this position by appeal to views (more and less widely held) within the philosophy of science literature. Perhaps the most widely-held claim we appeal to is that science can be separated into *domains* of inquiry. An important difference between at least some domains of inquiry is the *level* of the inquiry—the extent to which the entities concerned are fine-grained or coarse-grained. For example, biological organisms are clearly coarser-grained entities than individual molecules. Other domains of inquiry may differ not in level but in *scope*. For instance, it is not clear which of island biogeography and rainforest ecology is the more fine-grained inquiry, but the scope or subject matter of these two scientific domains clearly differs.

Note that, while philosophers of science and scientists alike freely talk about different domains of science, and while some particular domains have paradigmatic content (e.g., the basic structure of time and space is the purview of physics), no-one supposes that one could clearly delineate and enumerate all the various scientific domains. Nonetheless, it is reasonable to appeal to domains of inquiry even if these domains (especially ones concerning the *special* and what we dub the *extra special* sciences) have vague boundaries and content. This point will be important below.

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circumstances, such as the proposal recently defended by Stefánsson (forthcoming). See too Hawthorne (2005), Schulz (2010), Moss (2013).

While it is also generally accepted that there are different 'laws' pertinent to different domains of inquiry, the status of these 'laws' at domains that are higher than fundamental physics is controversial.[6] Setting aside issues about whether laws must be strict or universal in scope, the important issue is whether there are lawful (i.e., non-accidental) regularities in the special sciences that have some amount of autonomy. Our account of counterfactuals depends on such autonomy, and here we are in company with those philosophers of science who offer positive accounts of lawful regularities in the special sciences, which are typically characterised as *ceteris paribus laws (cp laws)* that have an implicit scope restriction to circumstances in which the regularity in question holds (for a summary of the various accounts of *cp laws*, see Reutlinger et al. 2017).

As far as the finer details of so-called *cp* laws go, and whether they support the truth of candidate would-counterfactuals as we propose, the territory is much more disputed, so the burden of proof falls on us to articulate an account of *cp* laws that supports our proposal. Indeed, even without investigating the details of *cp* laws, one might doubt that special-science laws have the deterministic character needed to support ordinary would-counterfactuals. After all, the common line of argument is from lower-level determinism to higher-level indeterminism (see, e.g., List and Pivato 2015) rather than from lower-level indeterminism to higher-level determinism, which is roughly what is required for our response to counterfactual scepticism (at least for *some* cases; recall the indeterministic higher-order *science of chancy devices like coin tosses*). In what follows

[6] Hence our use of inverted commas. There is considerable debate about what are the necessary and sufficient conditions for law-hood, and whether the higher-level or special sciences do in fact have laws. We need not take a stand on *all* these issues; for our purposes, what matters is that there are regularities in the special sciences that are lawful, as opposed to accidental, and so fit to play a role in scientific explanation.

we take up this challenge. We identify a general way of conceiving *cp* laws (as well as some possible ways to fill in the details) that is independently attractive and supports our proposal. In 3.1, we outline the features of this general approach to *cp* laws and how it gives lie to a well-known supposed dilemma for *cp* laws. We then argue in 3.2 that *cp* laws, so construed, can support counterfactuals in line with our proposal.

3.1 The content of *ceteris paribus* clauses

Consider some paradigmatic examples of *cp* laws:

> *Mendel's Law of Segregation*: "In a parent, the alleles for each character separate in the production of gametes, so that only one is transmitted to each individual in the next generation." (Rosenberg & McShea 2008, 36)

> *The Law of Demand*: Under the condition of perfect competition, an increase of demand of a commodity leads to an increase of price, given that the quantity of the supply of the commodity remains constant (Roberts 2004, 159; Kincaid 2004, 177)[7]

> *The Character of Shield Volcanoes*: 'Shield volcanoes erupt effusively' (Strevens 2014, 1819)

[7] The *Law of Demand* and *Mendel's Law of Segregation* both appear, with the references as stated, in Reutlinger et al. (2017).

The hidden *ceteris paribus* clause in each case restricts the circumstances at issue to those in which the regularity in question holds. The possibility of other circumstances in which the regularity does not hold do not necessarily threaten the truth of the law. Mendel's law of segregation does not apply, for instance, in cases of *nondisjunction*, when chromosomes fail to properly separate. The law of demand does not apply, even under *perfect competition*, in cases where consumers are *irrational*. Shield volcanoes with pyroclastic shields erupt explosively rather than effusively.[8] Nonetheless, these *cp* laws arguably say something substantive and interesting about how the world is.

But what exactly is the substantive content of a *cp* clause? If *cp* laws are to support counterfactuals, their content had better stand up to scrutiny, such that they indeed amount to non-accidental regularities. A basic worry along these lines turns on whether the *cp* clause should be read as *definite* or *non-definite*. A *definite cp* clause is a complete, concrete list of *exclusions*, i.e., all the possible circumstances in which the purported regularity does not hold. That is, a *definite cp* clause enumerates a set of circumstances that amount to necessary and sufficient conditions for when the purported regularity does and does not hold. A *non-definite cp* clause is one that is not definite in this sense; it is often taken to be an open-ended or vague, as opposed to a complete list of exclusions.[9] The supposed dilemma is as follows: there are no true definite *cp* laws, because some conditions in which the relationship does not hold will inevitably be left off the list, while non-

[8] When a shield volcano is 'pyroclastic' it tends to erupt *explosively* rather than effusively, since its shield is not made by flows of highly fluid basaltic lava with low gaseous content, as is more common among shield volcanoes.

[9] The usual terminology in the literature is *definite* versus *indefinite cp* clause. For reasons that will become evident below, we prefer *definite* versus *non-definite* (the latter term being a more neutral way to describe the opposite of *definite*).

definite *cp* laws are trivial, because they effectively have the form '*X* holds unless it doesn't'. So '*ceteris paribus* laws' are either trivial or simply do not hold, either way they are not genuinely lawful.

There have been various responses to this supposed dilemma that are informed by subtly different accounts of *cp* laws (Reutlinger et al. 2017). Here we describe what we take to be the most promising general response, common to leading accounts of *cp* laws. The response involves reconceiving the ceteris paribus clause as implicitly referring to *a* fitting, privileged set of circumstances in which the purported regularity *does* in fact hold, rather than *all* the circumstances in which the regularity *does not* (versus *does*) hold. So a *non-definite cp clause* need not be some unintelligible catch-all that attempts to do what a definite *cp* clause is designed to do, only poorly, thus rendering the 'law' vacuous or trivial. Rather, the *cp* clause may simply imply that the regularity holds for some interesting or special set of circumstances, remaining silent on whether or not the regularity holds in other circumstances.

But what would count as a fitting and privileged set of circumstances, such that, if a regularity were to truly hold across this set, it may be considered lawful as opposed to accidental? This is a significant challenge. Fodor (1991) exploits the fact that *cp* laws pertain to 'higher-levels' of inquiry than fundamental physics, and as such, involve more or less coarse-grained entities that are *multiply-realised* at the finer grains of analysis. A higher-level relationship may count as a lawful regularity just in case it holds across a set of circumstances that is fitting in that it represents, in some sense, *all* the possible fine-grained instantiations (or 'realisers') of the course-grained entities featuring in the relationship. More specifically, for the relationship 'whenever *A* then *B*'

to count as a ceteris paribus law, it must be the case that, for all possible instantiations or realisers of A, namely, $A(R_i)$, there *exists* some set of circumstances C_i (a 'completer for $A(R_i)$') such that $A(R_i)$ & C_i are sufficient for B. As Fodor (1991, p. 23) puts it, '"It's a law that ceteris paribus $A \rightarrow B$" is true only if each of A's realizers have a completer'.[10]

A different account of the ceteris paribus clause, yet one that is similarly non-definite and non-vacuous, can be taken from the *dispositional* account of *cp* laws.[11] In this case the fitting circumstances implicitly referred to by the *cp* clause are ideal circumstances under which the *cp* law in question is the only relevant law in operation; no interfering forces are at play. As per Fodor's account, it is enough that there *exist* such fitting circumstances in which the relationship in question is made manifest for it to count as a non-accidental regularity. (Of course, advocates also claim that *cp* laws express relationships that *always* hold for the entities involved, at least in the form of a potentiality or disposition, regardless of whether the circumstances include interferences such that the relationship is not actually manifest; hence the name *dispositional account*.) Moreover, as per Fodor's account, the *cp* clause does not provide necessary and sufficient conditions for when exactly, across the entire range of possible circumstances, the disposition will be manifest.

The *completer* and *dispositional* accounts of *cp* laws are different in many ways, but these

[10] This is Fodor's initial definition of ceteris paribus laws. He goes on to add some caveats that need not concern us here.

[11] The dispositional account can be traced back to Mill, and says, roughly, that *cp* laws express causal dispositions that inhere in objects/set-ups regardless of whether they are manifested in any particular setting. Cartwright (1989) and Lipton (1999) are prominent modern advocates of the dispositional account.

otherwise disparate accounts get something right – the implicit *cp* clause featuring in *cp* laws identifies fitting circumstances in which the purported relationship holds. These accounts offer alternative ways, distinct from high probability, that a set of circumstances may be fitting. That is not to say that we rule out a notion of fitting circumstances based either partly or wholly on high probability (as per, e.g., Spohn 2002).[12] Having identified the key important properties of fitting circumstances, we want to leave the question open as to how exactly the further details are best specified. Some of these details do affect the analysis of particular counterfactual statements (as we indicate in section 5), but arguably, the truth value of such counterfactual statements is in fact unclear, and so there is no obvious discrepancy with ordinary usage in these cases.

3.2 The role of *ceteris paribus* laws in supporting counterfactuals

Let us now show how *cp* laws, broadly interpreted as above, support our proposal for understanding counterfactuals. First, the good news: many *cp* laws, including the examples above, state deterministic relationships that look promising for the truth of ordinary would counterfactual claims. Moreover, the fact that *cp* laws restrict the circumstances to those supporting the regularity in question seems to resonate well with our account of counterfactuals.

But now the challenge: one cannot simply take for granted that the antecedent of an ordinary counterfactual implies the the very same circumstance restrictions that are implied by the pertinent

[12] Note that one would need to say more about how to identify the set of circumstances with given (high) probability; for instance, the set of circumstances with probability p might be the maximally 'minimal' or 'dense' set that has probability p (cf., the identification of Bayesian *credible intervals*).

cp law. Indeed, it is thought that the literal *inexactness* of *cp* law statements (the fact that, absent the implicit ceteris paribus clause, they are false) comes back to bite when it comes to counterfactuals.

After all, 'shield volcanoes erupt effusively' is true only because it does not apply to any old shield volcano; it applies to shield volcanos in certain fitting circumstances, which excludes some circumstances, for instance, those involving pyroclastic shields. But therein lies a worry: the antecedents of typical counterfactuals are generally not so carefully specified as to pick out the relevant fitting circumstances, or so it would seem. Consider 5:

(5) Were Mt Pinatubo a shield volcano, it would have erupted effusively.[13]

The relevant *cp* law – 'shield volcanoes erupt effusively' – does not apparently make true the consequent of this counterfactual, either because, in Hájek's terms, the antecedent is *unspecific* in encompassing all types of shield volcanos, or the connection between shield volcanos and effusive eruptions is really *indeterministic*; in short, it appears as if the antecedent of the Mt-Pinatubo-as-shield-volcano counterfactual does not restrict to cases where shield volcanos erupt effusively.

Recall our proposal: we understand counterfactuals similarly to *cp* laws themselves, as having an *implicit* 'fitting circumstances' clause in the antecedent, whose meaning varies with the salient domain of inquiry. Here we part ways with other proponents of the lawfulness of *cp* laws. Others

[13] Mt Pinatubo in the Zambales mountains in the Philippines is in fact a *stratovolcano*, as opposed to a *shield* volcano. It erupted explosively (rather than effusively) in 1991.

do not rule out the line of reasoning expressed above regarding 5. Lange (2002), Woodward (2003) and Hitchcock and Woodward (2003), for instance, all maintain a close connection between *cp* laws and the truth of counterfactuals, but they go only so far as to claim that a counterfactual invoking a *cp* law is true only if the antecedent refers to the specific circumstances implicitly required by the *cp* law. It is not clear whether the specific circumstances should be taken to hold if this is not stated explicitly. Lipton's (1999, 157) position is clearer; when it comes to counterfactuals, or indeed any manifestation of the disposition expressed by a *cp* law, it is not assured that there will be no interfering factors, which complicates the usual relationship between lawful regularities and the way things are or would be:

> 'In the context of cp laws, however, counterfactual support and instance confirmability do not even provide reliable symptoms of law-likeness. 'All Fs are Gs, cp' may be a law yet not entail that if something had been an F it would have been a G, nor will observed Fs that are G always provide reason to believe that the next F will be a G as well, since we may have no reason to believe that all things will be equal, the next time.'

The standard view then seems to be that *cp* laws do not, after all, support would-counterfactuals. Statements like 5 are false, since, on closer analysis, Mt-Pinatubo-as-shield volcano *might not* be, for one thing, of the non-pyroclastic sort.

Despite the presumption in favour of the *inexact* reading of would-counterfactuals, we maintain that this asymmetry – between carefully circumscribed *cp* law statements and uncircumscribed counterfactuals which invoke them – should be resisted. The asymmetry is puzzling in light of

what seems to be the common background assumption of *all* defenders of *cp* laws – that *cp* laws are regularities pertaining to particular domains of inquiry involving particular sorts of entities under fitting circumstances. Surely then, if *cp* laws were to 'support' counterfactuals as per ordinary strict laws, then such counterfactuals must already be understood as concerning the relevant domain of inquiry. In that case, one would think that the antecedent of the counterfactual, on pain of inconsistency, must be understood as involving the appropriate sorts of entities under the fitting circumstances tied to that domain.

Still, one might deny (as Lipton and others seem to) that there is any inconsistency: a counterfactual may be interpreted with respect to a domain of inquiry, where this affects how we should conceive of the entities in the antecedent and yet does not further require that the antecedent includes an implicit restriction to the relevant fitting circumstances. In reponse, however, we can return to the point about asymmetry: why should we understand *cp* laws to involve an implicit restrictive clause concerning the circumstances that apply to the entities at issue, and yet not understand counterfactuals concerning these very entities to similarly restrict the antecedent circumstances? Given the entities involved, 5 invokes a domain of inquiry, let's call it 'basic volcano science'. As such, the relevant *cp* law is, let's say, 'shield volcanos erupt effusively', where it is implicit in this law statement that the circumstances are the fitting ones. It seems natural that these same fitting conditions, characteristic of the domain of volcano science, should also apply to the antecedent. If so, given the domain of basic volcano science, the Mt-Pinatubo-as-shield-volcano counterfactual is true – in virtue of invoking a *cp* law that happens to be deterministic in character.

We regard it a feature of our proposal that it allows counterfactuals to effectively serve as vehicles for making claims about the actual world at various levels of inquiry. A few brief comments on this point are in order, although we save a more detailed analysis for future work. To begin with, we hold that counterfactuals invoke generic facts about the world, concerning more or less narrow classes of entities under fitting conditions. In the simplest case, we maintain, counterfactuals make direct claims about these generic facts; as in, counterfactuals convey the very law, often a *cp* law, that governs their truth conditions. Take 5 above: On the most natural reading, Mt Pinatabu is not central to the message; this particular active volcano is simply the vehicle for expressing the lawful regularity that shield volcanos erupt effusively under fitting circumstances. 2a is an even more obvious case of a counterfactual being used to directly express a law. The two individuals picked out in the antecedent are not in any way special; they are just *some* pair of individuals useful for expressing Mendel's law of segregation.

Of course, not all counterfactuals simply express lawful regularites; many seem to concern *particular happenings* or trajectories of events. In a lot of these cases, we maintain that the particular happening at issue is an actual one, not a counterfactual one.[14] Often we want to *explain* what actually happened, and we do so indirectly by appealing to what might otherwise have happened if things had been different. But any such explanation of an actual happening (or partial explanation, as the case may be) relies on generic facts concerning an appropriate domain of inquiry. For instance, consider 5*, a slight modification of 5:

[14] Recall our rejection of so-called counterfacts, as noted in footnote 5.

5*) Were Mt Pinatubo a shield volcano, it would have erupted effusively and had a less dramatic aftermath for the inhabitants of the area.

The further detail in the consequent suggests that this counterfactual is intended to convey information about Mt Pinatubo, a particular volcano, and the impact of its eruption on the local inhabitants. The counterfactual provides at least a partial explanation of the volcano's impact by suggesting conditions under which the impact would have been different. We are effectively told that shield volcanoes under fitting conditions erupt less violently, and from this claim regarding basic volcano science are presumably supposed to infer that while circumstances were in fact fitting, Mt Pinatubo is an alternative type of volcano to the shield kind, and that is why its eruption had the dramatic impact it did.

Spelling out a precise taxonomy of the scientific claims that may be expressed by counterfactuals is beyond the scope of this paper.[15] This is important future work because it will likely complicate the interpretation and evaluation of counterfactual statements: we suggest that not just the entities referred to, but also the nature of the scientific claim at hand, affect what domain of inquiry is appropriate in determining the truth conditions for any given counterfactual, and thus the truth value of the counterfactual. For now, we must put these complications aside; our point is simply that counterfactuals are primarily tools for making claims about the actual world that rest on

[15] Having said that, let us just mention one further type of scientific claim expressible by means of counterfactuals: counterfactuals may be used to express hypotheses that are pertinent for prediction when one is unsure of the initial conditions of a system, but wants to consider the possible circumstances that may arise. In these cases, counterfactuals can express what would follow *if* the initial conditions were thus and so. These relations of counterfactual dependence are of interest when we want to predict the outputs of a system *given the truth of various hypotheses about its initial states*.

generic facts or laws. If we are right about this, then our proposal is not so peculiar. Our appeal to domains of inquiry and the inclusion of an implicit 'fitting circumstances' proviso in the antecedent of counterfactuals is a well-motivated move, based on the relationship between counterfactuals and scientific claims.

4. Comparison with *near-miss* theories

Despite the fact that science appears to have multiple domains, one might be concerned that there are much simpler proposals – appealing to a single (non-domain-relative) body of natural facts – that have the same advantages. In particular, so-called *near-miss* proposals apparently fit this bill. Common to these proposals is the idea that, though there are cases in which the antecedent of a given counterfactual is true while its consequent is false, the counterfactual may nonetheless be true if these cases are objectively *too remote*.

One way to understand what it is to be remote is in terms of probability: a remote event is one that has sufficiently low probability. For example, Leitgeb (2012) suggests that 'If P were true then Q would be true' be represented in the conventional way as $P \mathrel{\Box\!\!\rightarrow} Q$, where the counterfactual is true just in case the probability of Q given P is sufficiently high. Counterfactuals are thus tied to *conditional probabilities*. Bennett (2003) and Williams (2008) also adopt near-miss approaches, though the central idea is implemented in slightly different ways. We focus on Leitgeb's proposal.

Leitgeb's conception of counterfactuals yields an answer to the sceptic's argument: if the probability that the glass shatters given that you drop it is high enough, then 1a will come out true.

The troubling possibilities to which the sceptic appeals are very improbable, and thus, may not threaten the truth of would-counterfactuals.

Our proposal does not suffer from two problems that plague Leitgeb's and other near-miss proposals. In what follows, we discuss these problems in turn, concerning lotteries and agglomeration (4.1), and modus ponens (4.2).[16]

4.1 Lotteries and agglomeration

Consider a 1000-ticket lottery with one prize that is never played. 6a rings false.

(6) If I bought a ticket, I would have lost.

I *might not* have lost! However, the probability that I would have lost given that I buy a given ticket is very high.[17] So Leitgeb delivers the wrong result that 6 is true in the situation described.

A related problem for Leitgeb concerns an argument form often referred to as *agglomeration* (see, for instance, Hawthorne (2005), Hájek (ms) and K. Lewis 2016):[18]

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[16] These inferences may be invalidated for other reasons (see Briggs (2012) and Santorio (forthcoming)). But we need not invalidate these inference patterns *in virtue of our response to counterfactual scepticism* or with respect to ordinary counterfactuals of the sort we discuss here.

[17] If you think 1:1000 odds ratio is too high, such that the probability of a ticket losing is not sufficiently high, make it a million-ticket lottery.

[18] We are taking 'argument forms' to apply at the level of *propositions* rather than sentences; in the characterisation of the argument form, 'P' and 'Q' each stand for some proposition and not, for instance, some arbitrary sentence. The characterisation of *modus ponens* in section 4.2 also reflects this focus on the relationship between propositions.

$P \mathrel{\Box\!\!\rightarrow} Q_1$, $P \mathrel{\Box\!\!\rightarrow} Q_2$, therefore $P \mathrel{\Box\!\!\rightarrow} (Q_1 \,\&\, Q_2)$

Consider the following series:

(7i) If the 1000-ticket lottery were played, ticket 1 would have lost.

(7ii) If the 1000-ticket lottery were played, ticket 2 would have lost.

…

(7m) If the 1000-ticket lottery were played, ticket 1000 would have lost.

On Leitgeb's proposal, (7i) through (7m) are all true.[19] And yet (7*) must be false, since the probability of the consequent given the antecedent is zero.

(7*) If the 1000-ticket lottery were played, ticket 1 would have lost *and* ticket 2 would have lost… *and* ticket 1000 would have lost.

This is a violation of agglomeration.

Again, our proposal delivers the correct results in these cases. 6 and 7i through 7m are simply false; any particular lottery ticket winning, no matter how improbable, occurs under fitting circumstance at the salient level of scientific inquiry (the *science of lotteries*, if you like). So there is no violation of agglomeration. (For what it's worth, 7* is also false.)

Or consider (8i) through (8ii),

[19] Again, if you think the 1:1000 odds ratio is too high, make it a million-ticket lottery.

(8i) If *n* male/female pairs of some species were to mate, pair 1 would produce offspring.

(8ii) If *n* male/female pairs of some species were to mate, pair 2 would produce offspring.

…

(8m) If *n* male/female pairs of some species were to mate, pair *n* would produce offspring.

At the level of the common-person's macro-biology, 8i to 8m are true, as per our earlier discussion. It is plausible that on Leitgeb's proposal too, 8i to 8m are true: in each case, the probability of the consequent is sufficiently high, given the stated antecedent. But consider now the 'agglomerated' counterfactual:

(8*) If *n* male/female pairs of some species were to mate, they would all produce offspring.

For some *n*, this will be false on Leitgeb's proposal, in violation of agglomeration.[20] But it will not be false on our proposal, if the same fitting circumstances apply to the agglomerated counterfactual as per each of the counterfactuals in the series. If different things count as fitting circumstances, then agglomeration is not violated, since the transition from 8i through 8m to 8* is not really a case of agglomeration.[21]

[20] The assumption here is that the probability of having offspring conditional on mating is independent for each pair, and above the designated threshold to make the counterfactual true. Then the probability of all pairs having offspring (conditional on mating) is the product of the individual probabilities (conditional on mating). We simply choose *n* such that this product is below the designated threshold.

[21] For instance, 8i through 8m may be associated with level *i* (say, the common person's macro-biology), while 8* is associated with level *j* (say, statistical macro-biology).

4.2 Modus Ponens

Leitgeb's proposal also invalidates counterfactual modus ponens (P, P $\Box\!\!\rightarrow$ Q, therefore Q). Suppose 1a is true and you drop the glass and it does not shatter in virtue of an improbable occurrence. This constellation of circumstances is possible given Leitgeb's proposal, but this is a case in which P and P $\Box\!\!\rightarrow$ Q are true, yet Q is false, invalidating counterfactual modus ponens.

Our proposal might also seem to incur this same cost, given that sometimes the world does not oblige us with fitting circumstances. Not so! Suppose someone utters 1a, pointing to a glass I am holding. Suppose further that I drop the glass and and there is some abberant physical arrangement that stops the glass from shattering. The presence of this arrangement will either count as a fitting circumstance or it won't. If it does not, the counterfactual involving fitting circumstances may well be true but the antecedent, interpreted as we propose, is not actually satisfied. If the arrangement does count as a fitting circumstance, then the counterfactual is false. In either case, the validity of modus ponens is not threatened.[22]

There is a general issue about what happens to the truth values of counterfactuals when strange, unlikely, or remarkable events occur at the actual world. Consider:

[22] A defender of a near-miss proposal could avoid invalidating modus ponens and agglomeration in these ways by helping themselves to the philosophical resources we offer. For instance, they could claim that the threshold for 'high enough probability' shifts with the implied domain of inquiry or that the implied domain of inquiry makes a difference to the correct interpretation of the antecedent. To the extent that a near-miss theorist tries to avoid these problems in this way, their proposal will not have a simplicity-based advantage over ours. Put another way, once one helps oneself to the resources we offer, what motivation is there to *also* go in for a near-miss-based response to counterfactual scepticism?

(9) Were you to drink heavily tonight, you would be hungover tomorrow morning.

Many are inclined to judge that this claim is true. It expresses something important about human biology and alcohol.

But suppose that at 11:59pm tonight the sun expands and engulfs the earth, there is no morning, let alone a hangover. Some are, like us, inclined to suggest that there is nonetheless a true reading of 9; there is still an important lawful connection between drinking and hangovers that at least one good reading of 9 expresses and this regularity holds even if something interferes in a particular instance. Many who offer a true reading of 9 are prepared to give up modus ponens (Leitgeb, for one; but also Briggs 2012 and Lycan 2001). Accordingly, it might seem as if we must either give up modus ponens or give up the intuition that there is an acceptable true reading of 9 in the world in which the sun expands.

Our proposal allows this intuition to be vindicated while avoiding invalidating modus ponens. In line with our proposal, we propose interpreting 9 as 9s.

(9s) Were you to drink heavily tonight *under fitting circumstances*, you would be hungover tomorrow morning.

If what we are interested in expressing when uttering 9 is the lawful regularity between drinking and hangovers, then we will not consider the sun-expansion scenario to be a fitting circumstance

from the point of view of the relevant domain of inquiry. So 9 may well be true, without violating modus ponens, even if the agent in question drinks heavily and the earth is engulfed before midnight, since the latter event means that the actual world turns out to *not* be one in which the antecedent, interpreted in line with the relevant domain of inquiry, holds.

5. Shifts

Complexities in ordinary counterfactual talk have historically been a focal point for adjudicating between competing approaches to counterfactuals. For instance, the fact that the unaugmented strict conditional analysis of counterfactuals runs afoul of certain intuitive patterns of counterfactual reasoning prompt many to seek a better analysis. The unaugmented strict conditional analysis does not have the requisite flexibility to capture all the distinctions between counterfactuals that exist in ordinary language.

Recall that the strict conditional analysis says that $P \mathrel{\Box\!\!\rightarrow} Q$ is true just in case $\Box(P \supset Q)$. This analysis runs afoul of 'Sobel sequences' like the following:

> (10a) Were Alice to come to the party, it would be fun.
>
> (10b) Were Alice to come to the party and (yet) there was a major house-fire, it would not be fun.

10a rings true (or is at least not obviously false; more on that shortly), but so does 10b. The unaugmented strict conditional analysis cannot allow for this pattern of truth values. The reason is

that if a statement of the form, $\Box(P \supset Q)$ is true, then conjoining the antecedent with further propositions, to make $\Box((P \& R) \supset Q)$, cannot make the resulting claim false (or equivalently, it cannot make $\Box((P \& R) \supset \sim Q)$ true). Yet this is precisely what seems to occur in moving from 10a to 10b; the first rings true, and yet so does the second.

The ability to correctly handle sequences like this is a widely recognised desideratum for theories of counterfactuals. Our proposal can deliver the correct verdicts about Sobel sequences. We will get to the details below. For now, let us table another kind of sequence that has proved challenging: 'reverse Sobel sequences' or 'Heim sequences'.[23] Consider the following rearrangement of 10a and 10b:

(10b) If Alice were at the party and (yet) there was a major house-fire, it would not be fun.

(10a) If Alice were at the party, it would be fun.

Where 10a is entertained immediately after entertaining 10b, the truth of 10a can be correctly resisted. After all, when entertaining 10a immediately after 10b, it is hard to exclude the case where Alice is at the party and yet there is a house-fire! But this seems to be in direct tension with the previous judgment according to which 10a and 10b are both true.

The puzzle introduced in section 1 has a similar flavour. While it seems as if statements like 1a and 1b cannot both be true, it is also apparently a feature of ordinary reasoning that one can

[23] Named for Irene Heim, who von Fintel (2002) cites as introducing these sequences in a presentation in 1994.

correctly assert a would-counterfactual, and yet, at least in some cases, subsequently concede the truth of the corresponding might-not-counterfactual. How can a proposal for understanding counterfactuals satisfy these apparently conflicting demands?

One response is to side-line these puzzles to the domain of conversational pragmatics: what does and does not sound right in these contexts need not track the truth or falsity of the propositions expressed.[24] Others, us included, seek a semantic treatment of these puzzles.[25] For this latter strategy to work, what is required is the further versatility afforded by an extra parameter governing the semantics of counterfactuals. Those who have pursued this line tend to suggest that the extra parameter reflects the role of conversational context in determining the truth value of counterfactuals (von Fintel 2001, Gillies 2007, Ichikawa 2011, Lewis 2016).

According to the recent and elegant proposal of K. Lewis, for instance, 'counterfactuals are not just evaluated relative to the most similar antecedent worlds, but relative also to the worlds relevant given the context' (2016, 2). That is, irrelevant possibilities are either excluded from the set of worlds under consideration or are characterized as *distant* possibilities. This yields a response to counterfactual scepticism, because the possibilities to which the sceptic appeals may be irrelevant to the conversational purposes in play. There can also be subtle shifts in conversational context,

[24] Moss (2012, 2013), for instance, offers a sophisticated version of this line of response.
[25] Note that Emery (2017) denies such a sharp distinction; she claims that whether a response to counterfactual scepticism is best construed as a semantic or as a pragmatic proposal depends on how one prioritises 'fairly abstract theoretical virtues that one's semantics and pragmatics can exhibit' (409). We are sympathetic to this line, but consider the semantic route to at least have expository advantages; for one thing, desiderata (such as Emery's own 'objectivity constraint', which is akin to K. Lewis's notion of 'objectivity', discussed below) are typically more readily articulated for semantic proposals.

yielding shifts in the truth value of a given counterfactual. K. Lewis tells a plausible story as to how it works in the sorts of examples given in section 1, and her theory allows for the truth values of counterfactuals to shift accordingly.

Our proposal also has a certain amount of flexibility, given that it too has an extra parameter: the domain of scientific inquiry, which governs what lawful regularities are at issue. The domain of inquiry can shift and so change the interpretation of a counterfactual, as per the transition from 1a to 1b. But note that there is only limited leeway for such shifts, since, for one, the domain is not entirely independent of the wording of the counterfactual. (As noted earlier, 1a is a much more natural interpretation than 1b of the counterfactual concerning the dropping of the vase, since vases are typically conceived of as macro-level objects.) Moreover, even if contextual cues can sometimes override the wording of a counterfactual in determining the domain of inquiry (as per the shift from 1a to 1b given a persistent interlocutor), for certain uses of counterfactuals (e.g., to explain an actual happening) such shifts are not natural, or would at least require a radical change in the kind of scientific claim that the counterfactual conveys.

When it comes to the (extra) special science domains, shifts may be easier since the relevant domains and their characteristic entities/laws are not so well established. (But note too that this means the truth conditions of any single counterfactual statement are more contentious too.[26]) For

[26] For instance, one might not be inclined to accept 10a in the first place, since house-fires and plumbing problems are fairly common and salient in everyday life and so the relevent 'fitting circumstances' clause may not exclude these events. As we noted in section 3, extra special science domains often have vague bounderies and the scientific content of these domains may not be entirely settled. But there still seems to be a good true reading of 10a and inasmuch as there is such a reading of 10a, the point concerning Sobel sequences and Heim sequences still goes through.

instance, the transition from 10a to 10b invites a shift in the scientific domain at play invoked in part by the more detailed antecedent – from social psychology to say, the science of how groups respond to a broad range of threats – and, in turn, a shift in which lawful regularity is invoked. Different things will count as fitting circumstances on the corresponding interpretations of 10a and 10b. This captures how 10a and 10b can be true together. Nonetheless, if 10b is uttered first, the domain of scientific inquiry does not subsequently shift upon the introduction of 10a to the conversation. A further detail has been added to the antecedent in 10b that is hard to ignore when we consider 10a immediately afterwards; thus 10a rings false when interpreted immediately after 10b.

The most important feature that sets our proposal apart is that we foreground the *objectivity* of the facts that make true counterfactuals true. If K. Lewis is right, facts about counterfactual dependence seem to rock and sway with what groups of humans are interested in talking about. One might worry that the set of facts about what counterfactually depends on what is not so changeable and that tying counterfactual dependence to conversational purposes compromises the status of counterfactuals as genuinely worldly statements about the way things are. Note that this is not merely a worry about radical subjectivity. K. Lewis convincingly staves off the objection that, on her proposal, a counterfactual is true just in case the speaker holds that it is true for her own idiosyncratic conversational purposes. According to K. Lewis, conversational context has a certain objectivity, such that speakers may themselves be misguided about the very conversational context in which they are participating.[27] So her proposal does not suffer from radical subjectivism.

[27] Indeed, K. Lewis goes further in suggesting that conversational contexts may describe social institutions, as it were, rather than personal discussions. We might regard, say, the 'criminal law setting' or the 'higher-education setting' as conversational contexts. Indeed, K. Lewis even goes

But it still allows that the circumstances of human thought and talk, however objectively these circumstances may be described, affect the truth values of counterfactual propositions.

On the other hand, we propose that the facts about counterfactual dependence are fixed, there are just more such facts out there (concerning many different scientific domains) than one might have expected, and it is a subtle business as to which of these facts are invoked in each case. The lawful regularities which support counterfactuals are set, once and for all, by *the way the world is*. For instance, the lawful regularities with which biologists are concerned existed before anyone discovered biological regularities. Once we have identified the appropriate domain of inquiry and corresponding interpretation of a counterfactual statement, it is a completely objective matter whether that counterfactual, thus interpreted, is true.[28]

7. Concluding Remarks

Hájek begins his defence of counterfactual scepticism by distinguishing two camps of people interested in counterfactuals, the philosophy of language camp and the philosophy of science camp. With those in the philosophy of science camp, as he characterises it, he contends that taking the role of counterfactual claims in science seriously leads one to counterfactual scepticism. We have argued that this is not the case. Science, understood as a diverse, textured, and multi-leveled

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so far as to suggest that different scientific disciplines may count as conversational contexts. We obviously have a lot of sympathy for this way of conceiving conversational contexts. But our proposal draws a stronger and more steadfast connection between counterfactuals and science. We do not see science as just another conversational context, but rather a body of objective facts, albeit concerning different 'domains', that govern the truth of all counterfactuals.

[28] In this way, our proposal respects what Moss (2013) calls 'semantic humility'.

enterprise, leaves an important place for true, substantive, and objective (non-probabilistic) counterfactual claims. We have also given reasons to think that our proposal fits well with the considerations of interest to the philosophy of language camp, as Hájek characterises it; our account allows us to rise to the challenge of the complexity of ordinary counterfactual thought and talk without sacrificing objectivity. Our proposal suggests a method of harmonising constraints stemming from philosophy of science with those stemming from philosophy of language, allowing us to meet Hájek's sceptical challenge without compromise. This is reason enough to take our proposal seriously.

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