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Ι

What is

SUPERPHILOSOPHY?

If philosophy aims to understand how things, in the broadest sense of the term, hang together, in the broadest sense of the term (as Wilfrid Sellars once put it), then *superphilosophy* aims to understand how things, in the broadest sense of the term, *might* hang together, in the broadest sense of the term. This is philosophy for philosophers who are in it for the love of the game – no topic is too frivolous, too irrelevant; no theory too obviously untrue. While philosophical theories can fall short of the way the world really is, a superphilosophical position lives or dies by its defence; the superphilosopher has succeeded when their critic must grudgingly admit that their view is indeed a position that one could hold.

How do we start doing superphilosophy? One route (what we might call *position mining*) is to take a well-explored philosophical topic and to ham-handedly reframe it in the context of an unrelated philosophical framework. For example, we might look at the thoroughly explored topic of time and ask, 'What would a contextualist say about this?' – remember that such a question should always precede any indication that the answer is interesting or fruitful. Quite often you find that the

question has already been explored by a philosopher, but don't be disheartened! In a similar vein, for any extant philosophical question x, 'Isn't x a pseudo-problem?' is always an excellent question, and can always be defended.

Another way in (call it *superphilosophicalisation*) is to take an everyday subject that hasn't yet received philosophical consideration and to subject it to philosophical interrogation. We might consider questions such as 'Does the sky exist?' 'Do knees supervene on legs?' and 'Do clocks have a direction of fit?' If all else fails, 'What is *x*?' is timeless.

Likewise, you can't go wrong by challenging a distinction (for example, is there a bug/creepy-crawly distinction?) – our concepts are so blurry that you're guaranteed to reveal a latent difference of opinion between you and your interlocutors, and with it fertile ground for superphilosophy.¹ Conversely, there are countless new distinctions you can draw – indeed, most things are distinct, when it really comes down to it – the hard bit is articulating *why* you would draw them. While we're on the subject, is there a clean philosophy/superphilosophy distinction? I'm not sure – perhaps you can think of some people who think they're doing one but in fact it's the other.

A final strategy I want to highlight – call it *controversialisation* – is to take an obviously acceptable claim and to phrase it as a problematising question. *Is* snow white? *Can* a drawing really be 'of' someone? Seek out the difficult cases and read deeply and literally into surface grammar.²

So much for strategy; how should we situate superphilosophy within the history of thought? Well, superphilosophers share perhaps the clearest lineage and affinity with the sophists, for whom truth was secondary (or perhaps even equivalent) to argumentative success, and whose ca-

¹This is especially so because it's a uniquely frustrating experience to find that you've made a distinction without a difference – it's a great accusation to keep in your pocket, by the way.

²Coincidentally, why are so many of the 'paradigmatic truths' in philosophy straightforwardly false? Water (the clear liquid that fills our rivers and glasses) is rarely just H₂O; the metre bar in Paris is no longer a metre long; grass and the sky come in many colours; widowers are unmarried men but aren't bachelors; the list goes on!

reers depended far more on the latter.³ The sophists, too, were daring in the outlandishness of their positions: though only fragments of the napkin it was written on survive, Gorgias's argument that nothing exists could easily have been produced by a superphilosopher.⁴ Protagoras, Hippias, Safecrates, and the like would no doubt also recognise themselves in the movement.

Beyond the sophists, the spirit of superphilosophy has re-emerged within other schools of thought, among them the scholastics – with Aquinas's *Summa Theologica* taking time to discuss the deeply superphilosophical question of whether two angels can be in the same place at once – and later the pataphysicians, who revelled in the imaginary, the useless, and the minutely exceptional. There's no doubt we're in good company.

So come and play; let's do them proud!

³Indeed, the culture which fostered the rise of superphilosophy in the early twentyfirst century was presumably (to some extent) a product of two historical factors: a marketised education system which demanded exponential increases in philosophical output from a precarious workforce, and the fact that most of the reasonable answers to the fundamental philosophical problems had basically already been articulated – the near-inveitable outcome of the former in particular was that philosophers are now duty-bound to regularly articulate a new position on something, anything; to plant flags in the endless conceptual landscape and to make it seem like a good idea. But I honestly think this is more of a problem facing philosophy than superphilosophy.

⁴By the way, whether or not nothing exists, does 'nothing' exist? I'm sure philosophers have talked about it, but I feel that superphilosophers might have some interesting contributions to make to the question.

Π

Recent Work on Opposites

It's something of a mystery that philosophical discussion about opposites has only really emerged in the past few years. Sure, Hegel and Marx (and some others, I guess) were interested in opposites to some extent, but what I heard of all that never really got down to the important questions. For one, why were they silent on the question of the opposite of eating? Were they afraid to throw their hats into the proverbial ring?

Historical neglect notwithstanding, let's start with a brief taxonomy of views on opposites from the contemporary debate. Arguably what unifies all of these views is the instinct that finding an opposite involves a 'reversal' of some sort; taking one thing and turning it on its head.

The first such view, which we could call Wilde-Saulish invariantist pluralism, has it that anything that is not-x is x's opposite. On this view, the moon is the opposite of eating; let's not dwell on it.

A similar view, Hornettian invariantist monism, says that the opposite of x is x's *complement* – all of the things that aren't x, jointly, make up x's opposite. On Hornettian invariantist monism, the opposite of eating is not-eating.

A problem that both of these (invariantist) views share is that they fail what we can call the 'quite the opposite!' test. This test asks of x's purported opposite y, 'Can y (appropriately) be preceded by the phrase "quite the opposite!" when contrasted with x?' Consider the following two exchanges:

A: Is it too warm in here?	A: Is it too warm in here?
\checkmark B: Quite the opposite!	imes B: Quite the opposite!
It's too cold.	It's <i>not</i> too warm.

One of B's utterances is obviously inappropriate, and not just because I put a cross next to it to prime you to think so. Invariantists struggle to make sense of this data.¹

One view, Cull-Boltonian contextualism, seems to fare better with the 'quite the opposite!' test. On this view, x has many opposites, each of which can be found by holding certain features of x fixed, while 'inverting' one or more contextually relevant features. For example, on this view, the opposite of eating could be 'fasting', if the feature of being a food-related action was held fixed, but the amount of food being acted on was inverted (from 'some' to 'none'). But other interpretations could be equally valid in context, each of which would surely pass the 'quite the opposite!' test. Still, this view doesn't seem to get us all the results we want: clearly, cats are the opposite of dogs, and red is the opposite of blue, but exactly which features do we invert to get from one to the other, and which do we hold fixed?

It's at this point (when things have gotten slightly complicated) that a natural, shrugging move is to suggest a deflationary account of the phenomenon. The essential characteristics of a deflationary approach are that 1. it (trivially) identifies all of the cases, and 2. it tells us nothing about the phenomenon. What would such an account of opposites look like? Perhaps: 'x is the opposite of y if and only if "x is the opposite of y" is true' (or better yet, 'x is the opposite of y if and only if "x is the opposite of y" is the opposite of false')? Better still might be: 'x is the

^{&#}x27;They would pass the 'not so!' test with ease, however.

opposite of y if and only if x would be y on opposite day'. What would everyone do at a restaurant on opposite day? Serve the waiters? Throw up? Get eaten? All good options.

Here's the problem, though. The deflationist view reveals a pretty deep paradox within the very concept of opposites. For consider the following sentence:

(L) L would be true on opposite day.

L says of itself that it would be true on opposite day; is it true, or false? Supposing it's true, what it says is true, and so it *would* be true on opposite day. But if so, true would be the opposite of true. On the other hand, if we suppose that L is false, then what it says would be false, and so it *wouldn't* be true on opposite day, and what else could it be on opposite day, then, but false? But then false would be the opposite of false. Any truth-value we could give to L gives us contradictory (or at least incoherent) results.²

Nor are invariantist and contextualist views invulnerable to this problem. Our best bet, then, might be to embrace *opposites nihilism*: to concede that there are no opposites. If true isn't the opposite of false, what sense can we make of opposites at all?³

But this seems drastic. Clearly this concept is in need of repair, and so I welcome and invite the efforts of the amelioraters and the conceptual engineers. How can we make opposites a more stable (and perhaps more beautiful) concept? I leave the reader to decide what purposes they want opposites to serve, but can I please request that our best concept of opposites makes the sun the opposite of the moon, tea the opposite of coffee, and eating the opposite of drinking? I just think it would be nice; thanks in advance.

²Invariantists, who love a negation, will conclude that L would be *not*-true on opposite day. But in this case, L would also be not-true, and so not-true would be its own opposite – not much of an improvement.

³Or is the concept of truth that much less important than opposites that we should be truth nihilists before countenancing opposites nihilism?

III

On the Impossibility of Checkmate

An Open Letter to FIDE

We, the undersigned,¹ wish to dispute the entire settled record of wins and losses within internationally recognised chess: contrary to conventional belief, checkmate is impossible under FIDE rules. To see why, consider the following rules:²

Article 1.2. The objective of each player is to place the opponent's king 'under attack' in such a way that the opponent has no legal move. The player who achieves this goal is said to have 'checkmated' the opponent's king and to have won the game [...].

Article 3.1. [...] A piece is considered to attack an opponent's piece if the piece could make a capture on that square according to Articles 3.2 to 3.8. [...]

¹Add your signature here: https://tinyurl.com/impossibilityofcheckmate

²A proof along these lines was first articulated by Roberto 'Carlos' Morgan.

Articles 3.2 to 3.8 specify the moves available to the different pieces. 3.2 is representative:

Article 3.2. The bishop may move to any square along the diagonal on which it stands.

Article 5.1.a. The game is won by the player who has checkmated the opponent's king. This immediately ends the game, provided that the move producing the checkmate position was a legal move.

With these rules in mind, let's suppose a checkmate position were possible. For example, suppose that a white bishop were attacking the black king, and that black had no legal moves left. In this case, the game would immediately end. But this position would therefore be one in which the white bishop *could not* make a capture on the black king's square: such a move would be impossible because the game would already have ended. This contradicts the assumption that the white bishop *was* attacking the black king, and so in turn our assumption that this was a checkmate position turns out to have been contradictory. Checkmate positions are therefore impossible.

As a result, all games played under FIDE rules have consisted almost entirely of illegal moves; each such game should have ended in a draw after the first move, under Article 9.6:

Article 9.6. The game is drawn when a position is reached from which a checkmate cannot occur by any possible series of legal moves. This immediately ends the game, provided that the move producing the position was legal.

Sort it out, guys!

IV

Would Mirrors be Real if our Eyes weren't Real?

Are reflections real? Do they exist? Do they have a place in our ontologies? Historically, these questions have been somewhat tainted by some disparaging remarks that Plato makes in articulating his analogy of the divided line,¹ but all three should surely be answered in the affirmative. Simply put, reflections meet all of the criteria we tend to expect of real, existing things.

Let's start with (probably) the most widely accepted criterion for existence, that 'to be is to be the value of a bound variable' in the best scientific theory. The thought, I suppose, is that a good scientific theory of the world won't introduce entities where it doesn't need to (i.e. where it doesn't further an explanation), and so the objects that a good scientific theory makes reference to are the only ones you'd find in a

^{&#}x27;Somewhere around 509d in The Republic. Thanks to Janet Fornieri for pointing me to this detail.

complete picture of the world.² Would reflections find their place in our best scientific theories?

Well, they would presumably make an appearance in 'complete' sociological and historical theorising, since reflections have a huge, daily role in most people's lives – vanity and agony alike. It seems hard to explain this fact without appealing to reflections; we don't just look at *mirrors*, or *reflecting surfaces*, but rather our reflections in particular. We're interested in them *as reflections* because they tell us something about the world (and ourselves).

Such considerations might be met with an attempt to 'paraphrase' talk of reflections in terms of something more basic, the *real* objects that reflections ultimately boil down to. I don't know much about physics, but I suppose such a reduction might say that reflections are 'nothing more' than light bouncing off a sufficiently smooth surface; in turn they would probably reduce 'light' and 'smooth surface' down further, too.

But such a reduction would render the sociological considerations opaque – why would everyone be so interested in light reflecting off smooth surfaces? What the reduction is missing is that a reflection bears a particular similarity to the object it reflects. In talking about *your reflection*, I mean specifically the reflected light that originated from you, and which preserves certain structural features of your appearance. Are (or could there be) smooth surfaces which reflect light but don't preserve this structure?³ If so, I think it's safe to say that they would be pushing the limits of what would count as a reflection, and they certainly wouldn't play the same sociological role. Indeed, the same could be said for any paraphrase that didn't guarantee structural similarity.

²As an aside, this way of thinking always struck me as being motivated by the same kind of instinct that evolutionary psychologists often have, where everything that there is has to have some purely utilitarian value, rather than just admitting that music and being gay are fun. But this isn't the time or place to take on Quine.

³I bet mirrors display this kind of behaviour around black holes – correct me if I'm wrong, physicists!

But in this case, ultimately, the 'paraphrase' strategy either ends up individuating a special property of being a reflection (for example of being a collection of reflected light which bears a structural resemblance to its source) or it fails to adequately paraphrase talk of reflections; either way, reflections retain a unique ontological position within our best theories.

Other criteria for existence have also been proposed. Are reflections mind-independent? Perhaps the clearest indication that they are is that we can be *mistaken* about them: when a dog gets mad at the dog in the mirror, its mistake is clear enough; likewise for the baby who seems not to recognise anything at all.⁴ In this respect, reflections are clearly a discovery rather than an invention, in particular if we think of them as reflected light which preserves structural features; light gets reflected whether or not we're there to see it.

We might wonder whether reflections essentially require people to make sense of them as such, like colours or sounds. But isn't this thought basically a bad one? What evidence could anyone bring to bear on the question either way?⁵

Another criterion: do reflections have causal powers? Absolutely: if you absent-mindedly look at a stranger's reflection in a train window, and their reflection suddenly starts looking back at you, that's going to cause a reaction in you.⁶

Another one: are reflections spatio-temporally located? Yes! Temporally speaking, a reflection exists as long as light from a subject is reflected in the right way. Spatially speaking, a demonstration is clearest: go look at a mirror, and point at your reflection. There it is!

Finally, an easy one: are reflections illusory or hallucinatory? Well, they can *create* some interesting illusions – think of funhouse mirrors

⁴Not to compare my reflection-denying opponents to dogs and babies.

⁵Set a camera up to take a picture of a mirror while your back is turned from it and see what happens! Wouldn't your reflection be in the photo, even if no one ever looked at it?

⁶Not that that ever happened to me.

and halls of mirrors, for example – but in these cases the reflections themselves aren't illusions; the way they look is just misleading.

Now we've seen the positive case, let's consider two alternative pictures which would eliminate reflections altogether.

I. Reflections as mediated perception. Just as, when we see an object through a pane of glass, we still think of ourselves as seeing that object (but in a mediated way), we might say that seeing a reflection is nothing more than a mediated way of seeing the object that's being reflected. On such a view, we might paraphrase 'I am looking at my reflection' as 'I am looking at myself via a reflective surface'.

One problem with this view is that it risks over-generalising: how complicated or abstract can a process of mediated perception get before it becomes perception of a separate object? For example, are you literally seeing yourself in your phone's camera, or is it just a rapidly updating picture of you? Both reflections and phone cameras involve mediated perception in some sense; is there a relevant difference?⁷

Another issue is that this alternative requires a lot of ordinary assertions about reflections to be strictly speaking non-literal – on this view, a sentence such as 'My reflection's right hand lines up with my left' requires a very cumbersome paraphrase, for example, or perhaps even turns out to be false, flying in the face of common sense.

The moral I would draw here is that we do 'see ourselves' in mirrors in a sense, but that this 'seeing' is mediated by seeing our reflections, just as we can 'see' ourselves in photos because they're photos *of* us.

2. Reflections as properties of reflective surfaces. Another 'eliminativist' strategy would be to displace talk of reflections into talk of reflective surfaces. That is, we could paraphrase a sentence such as 'My reflection is in the water' as 'I'm being reflected in the water', or something similar. On such a view, there are no reflections, but rather reflective surfaces which reflect objects.

⁷For what it's worth, I'd love to see someone defend the claim that you can literally see yourself in theoretically anything that's connected back to you in some way – in abstract art, in a written description, in a love song's waveform – can it be done?

Such a view is unwieldy and oblique in the way that a lot of eliminativist views are, but does it work? Well, first, it's not clear how it deals with the case described before – what's the paraphrase for 'My reflection's right hand lines up with my left'? Presumably something like 'I'm being reflected in such a way that, lined up with my left hand, the reflecting surface gives the appearance of my left hand *as if it were my right hand*'. Perhaps this sounds natural to you, or perhaps you can think of a better paraphrase, but to my mind this doesn't get to the bottom of what that sentence means. It's also not particularly elegant (although a defender of such a view would probably say that this inelegance explains why reflection talk is so appealing).

Another unusually hard case for the eliminativist is one we saw earlier: 'I'm looking at my reflection'. This isn't adequately captured by 'I'm looking at the surface that's reflecting me', nor 'I'm looking at myself, as reflected by a surface'; in particular, the latter either lapses into the 'mediated perception' view of reflections, or commits itself to an object ('myself') that the viewer is looking at, which is distinct from both the viewer and the surface itself. Either way, it's a serious problem for the view.

There's much more to be said about reflections, but, to conclude, I'd like to make an appeal to common sense. When you look in a mirror, what do you see?

V

HAS THE 'PAPER WITH JUST A TITLE' GIMMICK CEASED TO BE AMUSING?

VI

Spinoza's Wheel

It's a little-known fact that rationalists invented the wheel, from first principles, towards the middle of the seventeeth century. Consider the triangle, the reasoning goes. In fact, consider *this* triangle:



Let's imagine that line AB is our road, and that our triangle is going to turn as it makes progress along it.¹ How effective is the triangle at doing this? Well, which set of transformations needs to take place for $\triangle CDE$ to undergo a full 360° rotation clockwise, ensuring at all times that at least one side or vertex of $\triangle CDE$ touches the line AB, but that no side or vertex of the triangle 'goes beneath' it? First, we rotate $\triangle CDE$ around point E, 120° clockwise:

^{&#}x27;Why does it need to turn? Because if you just push it you have to overcome a lot of friction. We're assuming that air has more 'give'.



Then we rotate the resulting $\triangle EC'D' \ 120^{\circ}$ around D':



And finally $\triangle D'E'C''$ around C'':



We're guaranteed that our triangle always touches AB over each step in our sequence of transformations because it starts out touching it, and only ever rotates around a point that's touching it.

That's good, but the motion that this sequence produced wasn't particularly smooth. You can imagine it would take a relatively large amount of force to turn that triangle 120° in one go, and, if nothing else, it would make for a bumpy ride. Let's now codify this common-sense notion of smoothness:

Smoothness. A sequence of transformations T is as *angular* as the greatest angle of any of its complete sub-transformations S, and *smooth* to the extent that it is not angular.

So our sequence with the triangle would have an angularity of 120° , leaving some room for improvement. Notice, though, that the *number* of sub-transformations has no bearing on how smooth a sequence of transformations is.

We're now in a position to define the wheel.

The wheel. The wheel is the object which is capable of undergoing the smoothest sequence of transformations which jointly make up a 360° rotation in one direction, with at least one of its sides or vertices always touching (but not crossing) a given line.

Making progress towards the wheel, for any *n*-sided shape, we can guarantee that a smoother 360° rotation is possible for an n + 1-sided shape. Consider for the sake of illustration a *square* undergoing an analogous series of transformations:



Now our sub-rotations are 90° at a time. In fact, this improvement of 30° per turn is the greatest improvement in smoothness possible; for at least 10 years Spinoza went so far as to call this 'the' wheel.

But indefinitely many smaller improvements are possible – I leave the full proof to the reader. Theoretically, then, the wheel has infinitely many sides, allowing for an infinitely smooth transformation. Of course, a full rotation takes infinitely long, but that's hardly the point.

VII

Epistemically Irresponsible Logics

Most conceptions of validity within logic try to tell us which inferences preserve a favourable truth-value. In classical logic, for example, the validity of an inference guarantees that if the premises are *true*, the conclusion will be, too.

Classical Validity. The inference from premises A_1, A_2, \ldots, A_n to a conclusion C is valid (written $A_1, A_2, \ldots, A_n \vdash C$) if and only if every interpretation on which A_1, A_2, \ldots, A_n are all true is one on which C is true.

'Paraconsistent' validity likewise preserves truth, although it does not consider truth to always be exclusive with falsehood.

But what if we didn't want our inferences to take us from truth to truth? What if we wanted a tool that actively led us astray, or kept us in the dark? In other words, what kind of logic would the worst reasoner use?

One option would be to randomise validity altogether:

Random Validity. The inference from premises A_1, A_2, \ldots, A_n to a conclusion C is *random-valid* (written $A_1, A_2, \ldots, A_n \vdash_R C$) if and only if the first coin tossed on considering it would come up heads.

This is surely an irresponsible way to reason, but is it a 'logic'? Quite the opposite; it's just noise. You could emulate random validity by just picking beliefs at random.

Another option. We could introduce another notion of validity such that, instead of truth, putting true premises together guarantees the *falsity* of the conclusion.

Antivalidity. The inference from premises A_1, A_2, \ldots, A_n to a conclusion C is antivalid (written $A_1, A_2, \ldots, A_n \vdash_A C$) if and only if every interpretation on which A_1, A_2, \ldots, A_n are all true is one on which C is false.

Let's see what antivalidity looks like in practice, using the following illustrative truth table:¹

p	q	$\neg p$	$\neg q$	$p \wedge q$	$p \vee q$	$p \rightarrow q$	$p \wedge \neg p$	$p \vee \neg p$
Т	Т	F	F	Т	Т	Т	F	Т
Т	F	F	Т	F	Т	F	F	Т
F	Т	Т	F	F	Т	Т	F	Т
F	F	Т	Т	F	F	Т	F	Т

Which antivalidities can we read off this? To name a few:

Single negation introduction. $p \vdash_A \neg p$ Oversimplification. $p \land q \vdash_A \neg p$ Disjunction super-introduction. $\neg p, \neg q \vdash_A p \lor q$ Modus-anti-ponens. $p, p \rightarrow q \vdash_A \neg q$ Ex nihilo contradictione. $\vdash_A p \land \neg p$ Law of included middle. $\vdash_A \neg (p \lor \neg p)$

¹Note that this table follows the standard classical definitions of the connectives.

In short, to quickly find antivalidities, take any *classicallly valid* argument and put a negation in front of its conclusion;² in doing this, you can take $\neg \neg C$ to be equivalent to C, though note that there is no antivalid *inference* from $\neg \neg C$ to C.

Antivalidity ensures that, starting from a body of true beliefs, your inferences rapidly produce falsehoods. However, they will not produce them consistently: further inferences from those *false* beliefs might accidentally yield truths. For example, since we have $p \vdash_A \neg p$, from any false p we reach by antivalid inferences, we can also antivalidly infer a true $\neg p$. While we might have hoped that antivalidity would take a true body of knowledge and use it to generate a new, entirely false one, the results are a little more mixed.

Another notion of 'validity' might take a different approach: rather than trying to necessarily corrupt a set of true beliefs, this one tries to conservatively extend a body of false ones. Instead of truth preservation, then, our goal is *falsehood preservation*.

Falsehood preservation. The inference from premises A_1, A_2, \ldots, A_n to a conclusion *C preserves falsehood* (written $A_1, A_2, \ldots, A_n \vdash_F C$) if and only if every interpretation on which A_1, A_2, \ldots, A_n are all false is one on which *C* is false.

Again considering our illustrative truth table, let's see which arguments are falsehood-preserving.³ One pleasing feature of this form of 'validity' is that it bears a spurious similarity to classical validity – we have (among others):

²Though note that this doesn't identify *all* of the antivalidities: in cases where the premises of an argument are jointly contradictory, antivalidity and classical validity actually match up.

³You might notice that a few columns weren't included; this was in the interests of space – feel free to add in the rest on your copy.

Modus ponens. $p, p \rightarrow q \vdash_F q$ Modus tollens. $p \rightarrow q, \neg q \vdash_F \neg p$ Disjunctive syllogism. $p \lor q, \neg q \vdash_F p$ Adjunction. $p, q \vdash_F p \land q$ Identity. $p \vdash_F p$ Double negation elimination. $\neg \neg p \vdash_F p$

But some falsehood preservation is a little less orthodox. Some examples:

Ex contradictione nihilo. $p \land \neg p \nvdash_F q$ Mega modus tollens. $p \to q, q \vdash_F \neg p$ Overadjunction. $p \vdash_F p \land q$ Under-addition. $p \nvdash_F p \lor q$ Disjunctive hyper-syllogism. $p \lor q \vdash_F p$

Oh, and all contradictions are by themselves falsehood preserving (and none of the classical tautologies⁴). But note that falsehood preservation doesn't allow us to infer *just anything* from a contradiction; only falsehoods.⁵

Falsehood preservation allows us to extend our false beliefs with confidence. And, although it sometimes incidentally preserves truth, it often takes the true to the false, too. Crucially, the result of a falsehood preserving inference is never an *improvement* on what you put into it. But can we do better? Is there a notion of validity which preserves the false and irreparably corrupts the true?

⁴This logic therefore also arguably deals with the paradoxes of material implication better than classical logic: the inference from q to $p \rightarrow q$ is not falsehood preserving, for example.

⁵Having said that, the argument from p and $\neg p$ to q is falsehood preserving. But note that we can't just infer p and $\neg p$ from a contradiction such as $p \land \neg p$. There's no falsehood preserving argument from any contradiction to any particular proposition (or its negation): contradictions are false on all interpretations, but atomic propositions (i.e. p, q, r, \ldots) are guaranteed to have at least some true interpretations.

Radical Antivalidity. The inference from premises A_1, A_2, \ldots, A_n to a conclusion C is *radically antivalid* (written $A_1, A_2, \ldots, A_n \vdash_{RA} C$) if and only if this inference is both antivalid *and* falsehood preserving.

Radical antivalidity is the form of validity at the intersection of antivalidity and falsehood preservation. It affords fewer possibilities than either on its own, but every inference should either extend falsehood or turn the true into the false, depending on what you put into it. Below are my suggested introduction and elimination rules for the connectives on such a conception of validity. Keeping in mind that the actual *definitions* of these connectives are identical to the classical ones, you can see that radical antivalidity produces some quite esoteric results:

Negation introduction. $p \rightarrow q, p \wedge q \vdash_{RA} \neg p$ Negation elimination 1. $\neg \neg p, p \wedge \neg p \vdash_{RA} p$ Negation elimination 2. $\neg \neg p, \neg p \vee \neg q \vdash_{RA} q$ Conjunction introduction. $p, \neg q \vdash_{RA} p \wedge q$ Conjunction elimination. $p \wedge q, p \rightarrow q \vdash_{RA} \neg p$ Disjunction introduction 1. $p \rightarrow q, \neg q \vdash_{RA} p \vee q$ Disjunction introduction 2. $p, \neg p \wedge q \vdash_{RA} p \vee q$ Disjunction elimination. $p \vee q, p \wedge \neg q \vdash_{RA} p \neq q$ Conditional introduction 1. $p \vee q, \neg p \vdash_{RA} p \rightarrow q$ Conditional introduction 2. $p \wedge q, \neg p \vdash_{RA} p \rightarrow q$ Conditional introduction 2. $p \wedge q, \neg p \vdash_{RA} p \rightarrow q$

Try it out for yourself!⁶

⁶I've introduced two forms of some of these so that there are falsehood-preserving and truth-degrading rules for all the connectives, even when the formula we arrive at is only false in one case. In the case of negation elimination, there were alternatives which did both, such as $\neg \neg p$, $p \leftrightarrow q \vdash_{RA} \neg q$, but I felt they were all a little messy. I found it amusing that the classical double negation elimination rule only works as an inference in this system by adding in some arbitrary contradiction as an extra premise – the same also goes for identity, for example (that is, we have $p \nvDash_{RA} p$, but $p, p \land \neg p \vdash_{RA} p$).

It's fair to say that this is a very bad notion of validity. However, it might not be the *worst*. One case in which radical antivalidity still sometimes produces truths is when our premises are a mixture of truths and falsehoods (for example, our conjunction elimination rule might inadvertently return a true $\neg p$ when only $p \land q$, and not $p \rightarrow q$, is false).

Are there non-trivial notions of validity which return falsehoods even more consistently? I welcome further investigation.

I think I'm even right in saying that you can make any falsehood preserving argument radically antivalid by adding a contradiction as an extra premise, though this might increase the odds of running into the problem I'm going to mention in a moment.

VIII

Quo Vadis, Superphilosophy?

I've taken up enough of your time, but I'd like to close this collection by offering some paper ideas for future superphilosophical research.

- **On the Plurality of Bizarro Worlds.** The fact that most things have multiple opposites implies that there could be infinitely many opposite days to today (each of which may well have its own, different opposites). Could a modal logic be deployed to map them out? If so, which one?
- Is Knowledge even *True* Belief? In Marty Robbins' song 'Big Iron', we're told that the townsfolk '*knew*' the ranger was about to meet his death, only for him to win the gunfight. Likewise, the narrator of Frankie Laine's 'Bowie Knife' '*knew*' his life would soon be snuffed out, but he too survives and wins (this time it's a knife fight). Do 'cowboy' knowledge ascriptions like these challenge the factivity of knowledge?
- *Is* this just a Pseudo-Problem? What *is* a pseudo-problem, anyway? Is the question of what a pseudo-problem is itself a pseudoproblem?

- **Can Absences be Individuated?** My earlier comments on the 'just a title' gimmick aside, I think if you submitted this one to *Dialectica* there's a non-zero chance they'd accept it. It's yours if you want to try!
- You (Whoever that May Be). Hot singles in your area want you! But do they want you *de re*, or *de dicto*? Could a phrase as naturally direct as the second-person pronoun admit of *de dicto* readings?
- **Get Meta Soon!** I don't have an idea for this paper, I just think it sounds like the kind of paper someone would write.
- **Conceptual Mechanics.** Also not a paper idea exactly, but why do conceptual engineers always seem to imagine themselves in a lab and not in overalls in an oily repair shop? I'd love to see a braver university than Oslo set up ConceptGarage. Just a thought.

I bet you can think of some much better ones, too. So what are you waiting for?