Published Papers: Notes, Typos, and Errata (Last Updated: September 2024)

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This document will be updated whenever new publications are added or new issues with earlier papers come to light.

(1) The Possibility of Truth by Convention

- Section 7.II of *Shadows of Syntax* updates the argument here, discussing in further detail all of the different options for the conventionalist. Which response is most natural depends largely on how "fact" or "proposition" are being understood in the argument.
- In this paper I was still writing "metasemantic" as "meta-semantic", as the word was still fairly unfamiliar at the time and I believe I had hit on the term independently. I now use "metasemantic" exclusively.
- Stylistically, this paper overuses abbreviations for latin terms, especially "e.g.".

(2) Quantifier Variance and the Collapse Argument

- This paper uses "meta-ontology" instead of "metaontology"; I really have no excuse for this.

- Page 242: typo — the superscripted "N" is not in italics here. This also happens again toward the top of page 243, and once on page 247.
- Page 243: typo — "*non sequiter*".
- Page 246: typo — needless indentation after point (1) is listed (not repeated with point (2), immediately following).
- Page 247: typo — "meta semantic". This happens again on page 248.
- Page 251: typo — "N" instead of "$\mathcal{N}$". This happens again in footnote 15 on page 252.
- Page 251: The translation is presented informally with both the plural variable "xx" and the singular variable "x" in the language of $\mathcal{N}$ mapping to "x" in the language of U. Obviously, in actual practice clashes must be avoided or else the translation won't give accurate results. I noted that we needed to avoid clashes on page 250, in the proof of the previous lemma, but could have said more about cases where (for example) one use of a U quantifier seemingly needs to be replaced by a use of both a singular and a plural quantifier in N. There are several options.
- This paper was finished in 2013 before I read a pre-publication draft of Cian Dorr's "Quantifier Variance and the Collapse Theorems". Accordingly, it does not address Dorr's semantic arguments; they are addressed in 9.IV of *Shadows of Syntax*, and more briefly in both footnote 33 of my "Quantifier Variance and Indefinite Extensibility" and in "Quantifier Variance", co-written with Eli Hirsch. My full response to Dorr's and related arguments appeared as paper (23) below.
- The published version of this paper has too many typos. To state the obvious: it's entirely my fault. The paper was accepted in July of 2014 and I was due to be on the job market for the first time that Fall. At the time I (falsely) believed that it was important for my job chances to have this paper appear online as quickly as possible, so I skipped on correcting the proofs.

(3) Conventionalism, Consistency, and Consistency Sentences

- Page 1355: typo — clause (ii) in footnote 8 uses "a" and "b" instead of "x" and "y".

- Page 1357: Footnote 13 cites *Shadows of Syntax* under its originally intended title, *Syntactic Shadows*. This was the title of my dissertation, which defended conventionalism about logic but didn't discuss mathematics.

- Page 1370: Footnote 41 cites a paper as "under review" that is still, years later, yet to appear. Most of the content of that paper was incorporated into chapter 10 of *Shadows of Syntax,* some of the other content was incorporated into the early parts of my first joint paper with Dan Waxman (paper (12) below).

- Related but distinct discussions of conceptual pluralism occur in section 5 of "Change of Logic, Change of Meaning", on pages 12-13 of "Talking with Tonkers", on page 1651 of my "Epistemology versus Non-Causal Realism", and most fully in 5.III of *Shadows of Syntax*.

- Despite what some readers have thought (perhaps misled by discussion on page 1364), the point of this paper is not to address the issues of arithmetical or syntactic determinacy. The discussion on pages 1369-1370 was meant to make this clear. My approach to determinacy is in chapter 10 of *Shadows of Syntax.*

- Another potential misunderstanding of the paper involves trying to understand *applied syntax* in terms of a *formal theory of syntax*. Obviously, that move doesn't advance the point at all. You cannot get *any* conclusions about applied syntax from pure mathematical theories alone, whatever they may be called, since empirical bridge laws are also required. Conventionalists and other pluralists can assume that actual syntactic facts are determinate, if they are so inclined. If this assumption is used in the background when arguing that we have a determinate grasp of arithmetic or syntax, this kind of "outsourcing"

to actual facts is indirect and subtle, nothing like using determinate quantification over relevant items in the explanation— Lewis's "just more theory" point from "Putnam's Paradox" is indirectly relevant, see also 7.IV, 11.VII, and 12.III of *Shadows of Syntax* for directly relevant discussion.

- In retrospect, I regret giving so many formal details about models of Martian arithmetic in this paper. These details seems to have misled some readers into thinking that my response to the argument traded on some formal claim, so that the Putnam-Koellner argument might be reworked by altering its formal basis. But to think this is to badly misunderstood both the arithmetization of syntax and the nature of mathematical pluralism.

(4) Talking with Tonkers

- The first complete draft of this paper was finished in the summer of 2011. For some information about its origins, see the preface to *Shadows of Syntax*.

- Page 17: I attempt to carry out the strategy for approaching the liar paradox mentioned here in some currently unpublished work.

- Page 18: Various different norms are actually in play when it comes to inference rules. See the discussion in 4.VII of *Shadows of Syntax*.

- Page 20: typo — clause (ii) in footnote 56 uses "a" and "b" instead of "x" and "y".

- Although some of the structuring choices here are not ideal (I'm generally not a fan of objection-reply prose), the last paragraph of section 7 and the 2 paragraphs of section 9 remain among my favorite passages that I've written.

- This is something of a position paper, and is a personal favorite out of my early papers. But chapters 3 through 5 of *Shadows of Syntax* contain my preferred development of my unrestricted inferentialist theory of logic. Though

I still think "Talking with Tonkers" is worth reading (I say as a completely unbiased source).

(5) Trapping the Metasemantic Metaphilosophical Deflationist?

- This paper is based on a presentation I gave on September 20, 2012 at the first meeting of the NYU Metaphilosophy & Metasemantics reading group, led by Yu Guo and myself.
- I wrote this paper in the early summer of 2014 and submitted it to *Metaphilosophy* on June 6, 2014. The paper was under review for an unusually long time, eventually I heard back with an acceptance on December 2, 2015.
- I still like this paper stylistically, but if I were writing it now, I would just use "good" and "bad" instead of "*G*" and "*B*". I'm especially fond of the brief coda riffing on the *Tractatus*.

(6) Sider on the Epistemology of Structure

- Page 2426: The pointed formulation here of the incoherence of combining epistemological pragmatism and metaphysical realism came from Crispin Wright in a 2013 conversation, he was summing up and (I think) agreeing with my view.
- Page 2429: Here the paper originally included a discussion of using "inference to the best explanation" to answer the reliability challenge. I still think this is the most promising response for metaphysical realists, but it ultimately fails. The discussion was cut for length, not because I wasn't satisfied with it.
- As I mentioned in footnote 44, Ted Sider visited NYC, and attended a meeting of the NYU metaphilosophy reading group that I ran with Yu Guo, on February 13, 2013 (Ted had previously been at NYU but by then was at Cornell). At

that meeting I pushed Ted with early versions of the arguments in this paper, and he encouraged me to develop them into a paper. The paper was finished in something close to its final form a few months later.

- This paper failed R&R at *Mind*.

(7) Epistemology versus Non-causal Realism

- This paper was originally written in the Spring of 2010, during my second year of graduate school, for a class on evolution and ethics jointly taught by Laura Franklin-Hall and Sharon Street. I polished it and added clarifications over the years, but the basic approach has always been the same.
- Page 1647: typo — "...throwing darts at board with...".
- Frustratingly, I have seen discussions in the literature that badly misstate or misread my sensitivity and safety conditions and also ignore or brush aside my neutral framing of the ultimate support for the "reasonable epistemology" constraint.
- As the paper's title suggests, the central goal of this paper was to clearly lay out the *structure* and *target* of a fully general Benacerraf-Field style epistemological argument, so most of the paper is devoted to those tasks. Much other relevant material — alternative replies to Lewis's objection, the analogy to skepticism, alternative replies to the evolutionary objection, more detail on the sensitivity and safety conditions (types of modality, the needed similarity metric, counterpossibles, generality and the role of methods, systematic interference, and so on) — had to be left out. Yet all of this and more might soon see the light of day, because...
- In 2012, during *his* second year of graduate school, Dan Waxman independently wrote a paper similar to mine. After comparing notes, Dan and I then collaborated on a paper, titled "Reliability, Explanation, and the Failure of

Mathematical Realism". In that paper we pushed the epistemological argument hard at the specific target of mathematical realism. This joint paper was widely circulated at NYU in 2013 and 2014, but was never published. In the spring of 2022 I taught a graduate seminar on epistemological arguments against realism, with Dan in virtual attendance, where the most recent literature on the topic was considered.

- This paper failed R&R at *The Australasian Journal of Philosophy*.

(8) Revisiting Quine on Truth by Convention

- Page 122: typo — there is a missing "to" in "...argument is amend...".
- Page 124: typo — unnecessary indentation after conditional proof and *modus ponens* are set out.
- Page 128: The later-Wittgenstein-related variations on Quinean themes that I mention here but set aside are discussed in detail in 7.IV of *Shadows of Syntax* (Quine's argument, covered in this paper, is discussed in 7.III).
- Page 135: The quote from Quine's "Methodological Reflections on Current Linguistic Theory" has a misprint — "behavior" swapped for "behaver", the quote should read: "...behavior is not guided by the rule unless the behaver knows the rule and can state it."
- This paper failed R&R at *Mind*.

(9) Internal and External Questions Revisited

- Page 180: typo — unnecessary indentation after the characterization of Euclid's theorem.

- Page 181: typo — unnecessary indentation after statement of the answers and methods principles.
- Page 204: typo — unnecessary indentation after the Carnap quote.
- I am obviously not impartial, but I think the third section of this paper contains a powerful general criticism of philosophical ontology. In paper our joint handbook article (paper (15) below), Hirsch and I appealed to it as one half of a disjunctive reply to all recent attempts to rehabilitate substantive ontology.

(10) Change of Logic, Change of Meaning

- This paper was originally written in 2011. It was (after "Talking with Tonkers") the second completed paper touching on aspects of my unrestricted inferentialist theory of logic, but came from an entirely different direction and didn't assume inferentialism. Those interested in my unrestricted inferentialist/conventionalist approach to logic should read the first two parts of *Shadows of Syntax*. For those wanting a much shorter introduction, this paper, along with "Talking with Tonkers" and "Revisiting Quine on Truth by Convention" provide the groundwork.
- Page 430: typo — unnecessary indentation after the displayed argument.
- The paper's arguments are freestanding, but some of the same ground is covered from an inferentialist/conventionalist perspective in chapter 5 of *Shadows of Syntax*. Including the important taxonomy of debates in the philosophy of logic given in section 5 of this paper.

(11) Quantifier Variance and the Indefinite Extensibility

- Page 93: I'm speaking a bit loosely here in saying that quantifier deflationism "entails" quantifier pluralism. A top down metasemantics does not quite

automatically lead to pluralism. See the discussion in chapter 9 of *Shadows of Syntax*.

- Some of my terminological choices here have since been superseded, see chapter 9 of *Shadows of Syntax* and my joint papers with Eli Hirsch. I now prefer "modest" and "strong quantifier variance" for the two main types of quantifier pluralism discussed here.

(12) (with Waxman) A Metasemantic Challenge for Mathematical Determinacy

- Our policies about capitalizing the statement of our named principles were applied inconsistently.
- Page 484: typo — in footnote 20, "...for some discussion of...see...for discussion".
- Page 487: typo — unnecessary indentation after the displayed argument.
- Page 488: An updated omega rule approach is defended in "Infinite Reasoning" and in 10.VII of *Shadows of Syntax*.
- Page 489: After this paper appeared, Sharon Berry offered an argument combining McGee and Field with realism about modality. For discussion of this argument, see 10.IV of *Shadows of Syntax*. For my own approach to using open-endedness to argue for arithmetical determinacy, see 10.V of *Shadows of Syntax*.
- Page 489: In unpublished work, Waxman has pursued the "cognitive imagination" approach to (something like) determinacy, and I (also in unpublished work) have critically responded. These unpublished papers connect recent work on imagination to the epistemology of mathematical consistency.
- Page 492: typo — "...as an approach to...this approach is...".

- Some readers have assumed that Dan and I both think that arithmetic is indeterminate. This is false. We both think (for slightly different reasons — see above) that arithmetical truth is determinate but that set theoretic truth is not.
- This paper was blindly reviewed, but was submitted to a special issue of *Synthese*.

(13) (with Hirsch) Quantifier Variance and the Demand for a Semantics

- The original idea to write this paper came out of an e-mail discussion of my "Quantifier Variance and the Collapse Argument", in early 2015.
- Page 593: typo — unnecessary indentation after the displayed argument.
- The mathematical reason that the semantics we develop here is possible has to do with some unique features of set theory with urelements. In "Ontology, Set Theory, and the Paraphrase Challenge", I prove the general result needed for this and relate it to the dialectical situation of this paper as well as metaphysical paraphrases more generally.

(14) Killing Kripkenstein's Monster

- The basis for this paper was a presentation I gave on October 18, 2012, to the NYU Metaphilosophy & Metasemantics reading group, led by Yu Guo and myself. In 2013 I attended two meetings of a class on Wittgenstein that Kripke was giving at CUNY. My goal was to discuss and argue about my proposals with Kripke himself. But after a couple of meetings it became clear that Kripke's class was going to be focused more on history (including personal history) and other aspects of Wittgenstein than on the Kripkenstein book's anti-dispositionalist arguments. My paper was written in the summer of 2016, with the idea of using it as a job market writing sample, though I ultimately decided not to.

- Page 270: typo — extra space in "*A* -GENERAL".
- Page 271: Though I think it was mostly fine for my purposes in this paper to set it aside, Boghossian's holism challenge that I mention here deserves a separate response. I attempt this in a finished but unpublished paper after many versions and many false starts over the years.
- Page 272: The "even" in "But even intuitively..." is best deleted.
- Page 277: typo — missing "a" in ...the sum in given particular case...".
- Page 286: typo — the Boghossian quote is actually from page 513 of "The Rule-Following Considerations", not page 170.
- This paper was 20,000 words long when accepted, so the editor asked me to cut 2,500 words, saying he didn't care how or from where. Because of this, many issues mentioned in the paper were originally given fuller discussion, and some topics were deleted entirely (for instance, obviously my treatment needs to be tweaked slightly to deal with direct indexing or self-reference of certain kinds). I could easily write a fairly long book covering the material in this paper in more detail. I plan to eventually do so in a general book on the nature of meaning and content.
- This is one of my favorites among my papers and it seems to have convinced many readers. There are some strange and misleading criticisms in the published literature (including, bizarrely to my mind, in supposed *encyclopedia* articles), so please read the paper for yourself.

(15) (with Hirsch) Quantifier Variance

- This paper was invited. Eli was invited to contribute an article on quantifier variance for the handbook and he asked me to write it with him. I have a *ceteris paribus* policy against accepting invitations, but occasionally make exceptions for pedagogical purposes.

- This paper presented a special writing challenge, since it had to be under 5,000 words. We eschewed footnotes, channeled the spirit of Bertrand Russell as best we could, and just barely managed.

(16) (with Waxman) Supertasks and Arithmetical Truth

- Page 1278: Note that we are careful to talk of the truth of *each* of the individual instances, but we are *not* saying that the evidence given by the supertask computation is a single truth generalization. If it were, standard compositional truth axioms could be used to finitely prove Goldbach's conjecture from this evidence.

- Page 1282: typo — our earlier joint paper (paper (12) above) is listed twice in the bibliography.

- Chapter 10 of *Shadows of Syntax* contains my own take on the role of open-endedness and the omega rule in securing arithmetical determinacy. See also paper (18) below.

(17) Ontological Commitment and Ontological Commitments

- This paper was drafted during my first quarter at Stanford, after I reread Fine's paper for a metaontology class I was teaching. I had previously read the paper in 2009, when the *Metametaphysics* anthology was first released.

- I find that numbering formulas on the right, rather than the left, is unnatural and harder to read, but my left-numbering was changed throughout the paper to right-numbering during typesetting, so as to conform to house style.

- Page 2856: Of course, (11) doesn't express the full strength of a normal commitment to integers. To capture that, I think you would need to bring in a

connection between quantifiers and their instances (10.VII of *Shadows of Syntax* sounds this theme, in a different context). In natural language, even more connections get brought in. My closing discussion (of plural terms, and logical and theoretical resources) was meant to connect to this point.

- Page 2857: typo — extra space after "*modus tollens*".

- Page 2857: I've been asked about the discussion of getting the natural language entailments wrong and my quick response. I'm not denying that the entailment sounds very strange, but we wouldn't actually interpret someone using "integer" in this way, along these lines. What matters is how to regiment standard utterances of "*integers* exist", in natural language, into our formal model.

- Page 2858: I have also been asked if (16) was intended. It was. It is not analytic or necessary, nor part of any analysis, its virtue was simply being weaker than Fine's assumptions while serving for the entailment — the plural "mammals exist" entails the singular "there is a mammal", so with (16) by *modus ponens*, we have "there is a tiger", which plurally entails "tigers exist". The more natural, reversed version of (16) does not serve for the entailment. Yet again, the context matters, as does the assumed connection between the particular predicates. What we typically express with existence claims in natural languages is both context sensitive and quite granular, connecting to singular and plural terms, demonstratives, and other aspects of language. This is what my concluding comments were meant to indicate — ontological commitment *never* takes place in a vacuum. I don't think Fine disagrees with this.

(18) Infinite Reasoning

- This paper was created in the Fall of 2019, as a major overhaul of an earlier unpublished paper, "Following the Omega Rule", which was written in

the summer of 2015 after an epiphany in a bookstore cafe. The discussion in chapter 10 of *Shadows of Syntax* is closer to that in the earlier paper.

- Page 387: typo — there should be a comma after "remarks" in footnote 4.
- Page 390: typo — "a infinite" for "an infinite" in footnote 20.
- Page 391: typo — "the" in "the supertask argument" should also be underlined here, for stylistic consistency.
- Page 394: *Parts of Classes* is, indeed, an under-recognized masterpiece of philosophical style. In it, Lewis manages to briefly and clearly present extremely technical material without using any logical symbols aside from schematic letters. This policy even continues in the book's technical appendix, co-authored with John Burgess and Allen Hazen.
- Page 395: typo — should be "conclusion attitude", not "conclusion attitudes".
- Page 402: typo — there shouldn't be an indentation after the displayed uniform reflection formula.
- Pages 402-3: The objection to my position here, using uniform reflection, is stated too strongly. The assumption at line 1 isn't *generally* justified (though it is true for the Gödel sentence, for instance) and thus the claim that omega inconsistent theories are always inconsistent with their uniform reflection principles is too strong. What is true instead is that omega inconsistent theories are inconsistent with their uniform reflection principles *plus* the true theory of Π_2-sentences in the language of arithmetic ($Th_{\Pi_2}(\mathbb{N})$). This actually makes the objection *against* my position somewhat weaker than the paper suggests.
- Page 403: If you haven't read any Greg Egan, do so. Especially *Diaspora* and his early short fiction.

(19) Ontology, Set Theory, and the Paraphrase Challenge

- This paper grew out of reflections on the joint paper, "Quantifier Variance and the Demand for a Semantics". I wanted to understand the *mathematical* reason why the semantics we gave in that paper was possible, and to establish the generality we conjectured in the earlier paper. The first draft was finished in early 2017, but the paper was overhauled and rewritten for clarity several times on the way to the final version.
- The usual axioms of set theory as listed aren't all independent of each other. My treatment could have been shortened by noting this fact at a couple of points.
- Page 1244: typo — missing parentheses in "USet$\rho(\beta)$"
- Page 1244: There is unclarity in the informal statements here, related to my vacillation about translating terms, but hopefully the general idea still comes through.

(20) Functionalism About Inference

- The original version of this paper was written in the summer of 2014, but it was difficult to publish. Every year or so I'd update the references to keep it current. At some point, feeling I had improved as a writer, I heavily revised the paper to make it as clear and as fun as I could while retaining the same philosophical content.
- Shortened and simplified versions of the basic theory of inference given at length in the paper can be found in 2.VI of *Shadows of Syntax* and section 3 of "Infinite Reasoning".
- Page 15: typo — "thinkers"

(21) This Quintessence of Dust — *Consciousness Explained*, at Thirty

- When doing research on grue in early 2020, I discovered *Philosophical Papers*'s rereading option, which allowed discussion of older papers and books for renewed consideration. I then decided to try to write a re-reading of Dennett's *Consciousness Explained* (*CE*). I first read *CE* in full toward the end of 2010, in graduate school, so a decade later, I reread the book and wrote this paper.
- Page 302: typo — space in the middle of "system- wide", near the bottom of the page.
- In the bibliography there is a reversed quotation mark in the Block entry.

(22) Defending Understanding-Assent Links

- This is another one that was written years before it was published. See the concluding footnote for the story.
- Page 9225: Obviously the second premise in this argument is indexed to the possibility introduced in the first premise, as the claim is that it is possible for someone to fail to assent to a sentence while still understanding it as we do.

(23) Quantifier Variance, Semantic Collapse, and "Genuine" Quantifiers

- In the transition from page 748 to 749, the indentation of the premises has been lost.
- The argument of the appendix is presented informally, but it dramatizes the joint inconsistency of (E three), not-(three), and the reflexivity of "$=_L$". In standard natural deduction systems, the proof is ugly because of nested uses of $(\exists E)$.
- The first "Dorr" in the acknowledgements should have been "Cian Dorr".

(24) Inferentialism, Conventionalism, and *A Posteriori* Necessity

- This paper extends inferentialism and a partial, impure form of conventionalism to necessity *a posteriori*.

(25) Gruesome Counterfactuals

- This is a short paper dealing with counterfactual symmetry objections to counterfactual solutions to grue. It is a companion to a longer paper (paper (28) below), where I lay out my own preferred solution to grue. That longer paper is under review; this shorter paper is awaiting production at *Dialectica*. I have no idea why it has taken years to appear.

(26) The Sense-Data Language and External World Skepticism

- This is a massive paper defending sense-data and trying to answer the real philosophical challenge of skepticism. This is something of a large position paper, arguing for my overall approach to philosophy — Analytic Empiricism.
- I recently corrected page proofs, so the paper should appear soon.

(27) Imagination and the *A Priori*

- This paper defends the *a priori*/*a posteriori* distinction from some influential arguments from Williamson.
- The same ground is covered much more briefly and simply in Section 8 of *The* A Priori *Without Magic*.

(28) The Independence Solution to Grue

- This paper offers my solution to the grue puzzles. My ultimate goal is to pave the way for a major study of inductive logic and the problem of induction.

(29) Reference Magnetism Does Not Exist

- The top of page 5 says that quus function "disagrees" with addition at all but one point, but this should say "agrees" instead.

(30) Restricting the T-Schema to Solve the Liar

- The version first put online contained some errors introduced after proof correction, with several instances of corner quotes replaced with bracket quotes. This has now been fixed, so if your version includes these errors, please download.
- As I stress repeatedly, the local malfunction blocking is only a partial formalization of the intuitive idea here. In a book draft and in some of my unpublished papers, a full account is given.

(31) (with Cao) Mental Representation, "Standing-In-For", and Internal Models

- This paper grew out of discussions with Rosa of the standard slogan that representations stand-in-for the things they represent.

(32) Logical Conventionalism

- This is an overview of logical conventionalism, containing brief replies to all major objections (including recent objections). It will appear in the *Oxford Handbook of Philosophy of Logic*.

(33) Solving the Mystery of Mathematics

- This is my first piece of popular writing. My goal was to write something pushing mathematical conventionalism for non-professionals. I also have an unpublished piece that is meant to push the view for mathematicians, but once that is published, I have no further plans to publish on logical or mathematical conventionalism.
- Unfortunately, as often happens with popular writing, the editors of *Philosophy Now* made various changes and added section titles that make me cringe.

(34) The Liar Paradox and "Meaningless" Revenge

- This is the second paper I wrote on the liar paradox, the first presents my main approach and is unpublished (and has never been submitted to a journal, despite around 30 full drafts being completed over the last 5 years).
- The goal of this paper was to comprehensively discuss a particular revenge problem for meaningless theories. The related strong liar problem is also discussed more briefly. A paper focused on fully discussing the strong liar problem is currently undergoing R&R.
- This paper failed R&R at *Noûs*.

(35) (with Cao) Neural Decoding, The Atlantis Machine, and Zombies

- Footnote 43: typo — "This kind of reasoning from is most similar..."

(35) The Strengthened Liar Problem

- *to be added*