

Bibliography on Modality and Possible Worlds

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(Most abstracts taken from the *Philosophers Index* and PhilPapers)

Spring, 2014

Adams, Robert Merrihew (1974). "Theories of Actuality." *Noûs* 8: 211–31.
Reprinted in Loux 1979: 190–209.

— (1981). "Actualism and Thisness." *Synthese* 49: 3–41.

The thesis of this essay is that all possibilities are purely qualitative except insofar as they involve individuals that actually exist. This thesis is expounded and defended, and some of its implications for modality are developed; the chief implication is that what modal facts "de re" there are depends on what individuals actually exist.

Armstrong, David M. (1989). *A Combinatorial Theory of Possibility*. New York: Cambridge University Press.

Ayer, Alfred Jules (1936). *Language, Truth and Logic*. London: Victor Gollancz Ltd, 1946. 2nd edition.

Bacon, Andrew (2013). "Quantificational Logic and Empty Names." *Philosophers' Imprint* 13(24).

The result of combining classical quantificational logic with modal logic proves necessitism – the claim that necessarily everything is necessarily identical to something. This problem is reflected in the purely quantificational theory by theorems such as $\exists x \Box (x = x)$; it is a theorem, for example, that something is identical

to Timothy Williamson. The standard way to avoid these consequences is to weaken the theory of quantification to a certain kind of free logic. However, it has often been noted that in order to specify the truth conditions of certain sentences involving constants or variables that don't denote, one has to apparently quantify over things that are not identical to anything. In this paper I defend a contingentist, non-Meinongian metaphysics within a positive free logic. I argue that although certain names and free variables do not actually refer to anything, in each case there might have been something they actually refer to, allowing one to interpret the contingentist claims without quantifying over mere possibilities.

Bealer, George (1987). "The Philosophical Limits of Scientific Essentialism." *Philosophical Perspectives* 1: 289–365.

Scientific essentialism is the view that some necessities (e.g., water = H₂O) can be known only with the aid of empirical science. The thesis of the paper is that scientific essentialism does not extend to the central questions of philosophy and that these questions can be answered a priori. The argument is that the evidence required for the defense of scientific essentialism (e.g., twin earth intuitions) is reliable only if the intuitions required by philosophy to answer its central questions is also reliable. Included is an outline of a modal reliabilist theory of basic evidence and a concept-possession account of the reliability of a priori intuition.

— (2006). "A Definition of Necessity." *Philosophical Perspectives* 20(1): 17–39.

In the history of philosophy, especially its recent history, a number of definitions of necessity have been ventured. Most people, however, find these definitions either circular or subject to counterexamples. I will show that, given a broadly Fregean conception of properties, necessity does indeed have a noncircular counterexample-free definition.

Bennett, Karen (2005). "Two Axes of Actualism." *Philosophical Review* 114: 297–326.

— (2006). "Proxy 'Actualism'." *Philosophical Studies* 129.

Bigelow, John (1988). "Real Possibilities." *Philosophical Studies* 53: 37–64.

Blackburn, Simon (1987). “Morals and Modals.” In *Fact, Science and Value, Essays in Honour of A.J. Ayer’s Language, Truth and Logic*. Oxford: Blackwell. Reprinted in Blackburn 1993.

This paper displays a “quasi-realist” theory of necessary truths, in which our propensity to attach modal values to propositions is compared with our propensity to moral attitudes. The theory offers an alternative to Quinean scepticism to “as if” theories, and to modal realism.

— (1993). *Essays in Quasi-Realism*. Oxford: Oxford University Press.

Bricker, Phillip (1987). “Reducing Possible Worlds to Language.” *Philosophical Studies* 52: 331–55.

— (1991). “Plenitude of Possible Structures.” *Journal of Philosophy* 88: 607–19.

Which mathematical structures are possible, that is, instantiated by the concrete inhabitants of some possible world? Are there worlds with four-dimensional space? With infinite-dimensional space? Whence comes our knowledge of the possibility of structures? In this paper, I develop and defend a principle of plenitude according to which any mathematically natural generalization of possible structure is itself possible. I motivate the principle pragmatically by way of the role that logical possibility plays in our inquiry into the world.

— (1996). “Isolation and Unification: The Realist Analysis of Possible Worlds.” *Philosophical Studies* 84: 225–38.

If realism about possible worlds is to succeed in eliminating primitive modality, it must provide an “analysis” of possible world: nonmodal criteria for demarcating one world from another. This David Lewis has done. Lewis holds, roughly, that worlds are maximal unified regions of logical space. So far, so good. But what Lewis means by unification’ is too narrow, I think, in two different ways. First, for Lewis, all worlds are (almost) “globally” unified: at any world, (almost) every part is directly linked to (almost) every other part. I hold instead that some worlds are “locally” unified: at some worlds, parts are directly linked only to “neighboring” parts. Second, for Lewis, each world is (analogically) “spatiotemporally” unified; every world is “spatiotemporally” isolated from every other. I hold instead: a world may be unified by nonspatiotemporal relations; every world is “absolutely” isolated from every other. If I am right, Lewis’s conception of logical space is impoverished: perfectly respectable worlds are missing.

— (2001). “Island Universes and the Analysis of Modality.” In Gerhard Preyer and Frank Siebelt (eds.), *Reality and Humean Supervenience: Essays on the Philosophy of David Lewis*, 27–55. Lanham, MD: Rowman & Littlefield.

— (2006). “Absolute Actuality and the Plurality of Worlds.” *Philosophical Perspectives* 20: 41–76.

Brock, Stuart (1993). “Modal Fictionalism: A Response to Rosen.” *Mind* 102: 147–50.

Gideon Rosen, in his paper Modal Fictionalism (*Mind*, 1990) puts forward and defends what is intended to be an ontologically neutral alternative to modal realism. I argue that Rosen does not achieve this goal. His fictionalism entails realism about possible worlds. Moreover, any attempts to modify the analysis results in an undesirable multiplication of the modal primitives, a problem faced by those who take the standard modal operators as primitive.

Burgess, John P. (1997). “Quinus ab Omni Naevo Vindicatus.” *Canadian Journal of Philosophy* Supplementary volume 23: 25–65.

Useful paper clarifying Quine’s attack on quantified modal logic.

Carnap, Rudolf (1947). *Meaning and Necessity: A Study in Semantics and Modal Logic*. Chicago: University of Chicago Press.

Chalmers, David J. (2002). “Does Conceivability Entail Possibility?” In Gendler and Hawthorne (2002), 145–200.

Coffa, Alberto J. (1991). *The Semantic Tradition from Kant to Carnap: To the Vienna Station*. Cambridge: Cambridge University Press.

Landmark book describing the history of thought about a priority and necessity and analyticity, from Kant to the twentieth-century linguistic philosophers (like logical positivists and the ordinary language philosophers).

Correia, Fabrice (2007). “(Finean) Essence and (Priorean) Modality.” *Dialectica* 61(1): 63–84.

— (2012). “On the Reduction of Necessity to Essence.” *Philosophy and Phenomenological Research* 84(3): 639–653.

In his influential paper “Essence and Modality”, Kit Fine argues that no account of essence framed in terms of metaphysical necessity is possible, and that it is rather metaphysical necessity which is to be understood in terms of essence. On his account, the concept of essence is primitive, and for a proposition to be metaphysically necessary is for it to be true in virtue of the nature of all things. Fine also proposes a reduction of conceptual and logical necessity in the same vein: a conceptual necessity is a proposition true in virtue of the nature of all concepts, and a logical necessity a proposition true in virtue of the nature of all logical concepts. I argue that the plausibility of Fine’s view crucially requires that certain apparent explanatory links between essentialist facts be admitted and accounted for, and I make a suggestion about how this can be done. I then argue against the reductions of conceptual and logical necessity proposed by Fine and suggest alternative reductions, which remain nevertheless Finean in spirit

Craig, E. J. (1975). “The Problem of Necessary Truth.” In Simon Blackburn (ed.), *Meaning, Reference and Necessity: New Studies in Semantics*. Cambridge: Cambridge University Press.

Cresswell, M.J. (1972). “The World Is Everything That Is The Case.” *Australasian Journal of Philosophy* 50: 1–13. Reprinted in Loux 1979: 129–45.

Davies, Martin and Lloyd Humberstone (1980). “Two Notions of Necessity.” *Philosophical Studies* 38: 1–30.

deRosset, Louis (2009a). “Possible Worlds I: Modal Realism.” *Philosophy Compass* 4(6): 998–1008.

It is difficult to wander far in contemporary metaphysics without bumping into talk of possible worlds. And reference to possible worlds is not confined to metaphysics. It can be found in contemporary epistemology and ethics, and has even made its way into linguistics and decision theory. What are those possible worlds, the entities to which theorists in these disciplines all appeal? This paper sets out and evaluates a leading contemporary theory of possible worlds, David Lewis’s Modal Realism. I note two competing ambitions for a theory of possible worlds: that it be reductive and user-friendly. I then outline Modal Realism and consider objections to the effect that it cannot satisfy these ambitions. I conclude that there is some reason to believe that Modal Realism is not reductive and overwhelming reason to believe that it is not user-friendly.

— (2009b). “Possible Worlds II: Non-Reductive Theories of Possible Worlds.” *Philosophy Compass* 4(6): 1009–1021.

It is difficult to wander far in contemporary metaphysics without bumping into talk of possible worlds. And, reference to possible worlds is not confined to metaphysics. It can be found in contemporary epistemology and ethics, and has even made its way into linguistics and decision theory. What are those possible worlds, the entities to which theorists in these disciplines all appeal? Some have hoped that a theory of possible worlds can be used to reduce modality to non-modal terms. This paper sets reductive theories aside, and articulates and applies a framework for evaluating non-reductive theories of possible worlds. I argue that, if we abjure reduction, we should aim for a theory of possible worlds that is user-friendly. I then outline four leading contemporary theories and consider objections to each. My conclusions are negative: every theory we discuss fails to be user-friendly in some significant respect.

— (2009c). “Production and Necessity.” *Philosophical Review* 118(2): 153–181.

A major source of latter-day skepticism about necessity is the work of David Hume. Hume is widely taken to have endorsed the Humean claim : there are no necessary connections between distinct existences. The Humean claim is defended on the grounds that necessary connections between wholly distinct things would be mysterious and inexplicable. Philosophers deploy this claim in the service of a wide variety of philosophical projects. But Saul Kripke has argued that it is false. According to Kripke, there are necessary connections between distinct existences; in particular, there are necessary connections between material objects and their material origins. This essay argues that the primary motivation for the Humean claim, Hume’s datum , also motivates the key premise in an argument for the necessity of origins. The very considerations that the Humean takes to show that necessary connections between wholly distinct things would be mysterious and inexplicable indicate that there must be some such necessary connections. Thus, in the absence of alternative support, there is no reason to believe the Humean claim.

Divers, John (2002). *Possible Worlds*. London: Routledge.

— (2004). “Agnosticism About Other Worlds: A New Antirealist Programme in Modality.” *Philosophy and Phenomenological Research* 69: 660–85.

Divers, John and Joseph Melia (2002). “The Analytic Limit of Genuine Modal Realism.” *Mind* 111: 15–36.

Dorr, Cian (2010). “How to Be a Modal Realist.” <http://users.ox.ac.uk/~sfop0257/papers/ModalRealism.pdf>.

— (2014). *Counterparts*. Forthcoming.

Dorr, Cian and Jeremy Goodman (2014). “Diamonds are Forever.” Unpublished.

Edgington, Dorothy (2004). “Two Kinds of Possibility.” *Aristotelian Society Supplementary Volume* 78(1): 1–22.

I defend a version of Kripke’s claim that the metaphysically necessary and the knowable a priori are independent. On my version, there are two independent families of modal notions, metaphysical and epistemic, neither stronger than the other. Metaphysical possibility is constrained by the laws of nature. Logical validity, I suggest, is best understood in terms of epistemic necessity.

Einheuser, Iris (2012). “Inner and Outer Truth.” *Philosophers’ Imprint* 12.

Ewing, A. C. (1939-40). “The Linguistic Theory of A Priori Propositions.” *Proceedings of the Aristotelian Society* 40: 207–44.

Fara, Delia Graff (2009). “Dear Haecceitism.” *Erkenntnis* 70(3): 285–297.

If a counterpart theorist’s understanding of the counterpart relation precludes haecceitist differences between possible worlds, as David Lewis’s does, how can he admit haecceitist possibilities, as Lewis wants to? Lewis (Philosophical Review 3-32, 1983; On the Plurality of Worlds, 1986) devised what he called a ‘cheap substitute for haecceitism,’ which would allow for haecceitist possibilities while preserving the counterpart relation as a purely qualitative one. The solution involved lifting an earlier (Journal of Philosophy 65(5): 113-126, 1968; 68(7): 203-211, 1971) ban on there being multiple intra-world counterparts. I argue here that serious problems for ‘cheap haecceitism’ lurk very close to its surface, and they emerge when we consider the effect of using an actuality operator in our language. Among the most serious of the problems is the result that being the case in some possible world does not always suffice for possibly being the case. The result applies to any counterpart theory that employs a purely qualitative counterpart relation. The upshot is that if we are to admit haecceitist possibilities, as we should, then we must reject any purely qualitative relation as the one involved in the analysis of what might have been for an individual

- Fara, Michael and Timothy Williamson (2005). "Counterparts and Actuality." *Mind* 114: 1–30.
- Fine, Kit (1977). "Postscript." In *Worlds, Times, and Selves*. London: Duckworth.
- (1985). "Plantinga on the Reduction of Possibilist Discourse." In J. Tomberlin and Peter van Inwagen (eds.), *Alvin Plantinga*, 145–86. Dordrecht: D. Reidel.
- (1994a). "Essence and Modality." In Tomberlin (1994), 1–16.
- (1994b). "Senses of Essence." In Walter Sinnott-Armstrong (ed.), *Modality, Morality, and Belief*, 53–73. New York: Cambridge University Press.
- (1995). "The Logic of Essence." *Journal of Philosophical Logic* 24: 241–73.
- (2002). "The Varieties of Necessity." In Gendler and Hawthorne (2002), 253–82.
- (2003). "The Problem of Possibilia." In Loux and Zimmerman (2003), 161–79.
- (2005). "Necessity and Non-Existence." In *Modality and Tense*, 321–55. New York: Oxford University Press.
- (2007). "Response to Fabrice Correia." *Dialectica* 61(1): 85–8.
- Fitch, G. W. (1996). "In Defense of Aristotelian Actualism." *Philosophical Perspectives* 10: 53–71.
- Forbes, Graeme (1982). "Canonical Counterpart Theory." *Analysis* 42: 33–37.
- (1985). *The Metaphysics of Modality*. Oxford: Oxford University Press.
- French, Peter, Theodore E. Uehling, Jr and Howard K. Wettstein (eds.) (1986). *Midwest Studies in Philosophy XI: Studies in Essentialism*. Minneapolis, MN: University of Minnesota Press.
- Gendler, Tamar and John Hawthorne (2002). *Conceivability and Possibility*. Oxford: Oxford University Press.

- Gibbard, Allan (1975). "Contingent Identity." *Journal of Philosophical Logic* 4: 187–221. Reprinted in Rea 1997: 93–125.
- Grice, Paul and Peter F. Strawson (1956). "In Defense of a Dogma." *Philosophical Review* 65: 141–58.
- Hale, Bob (1996). "Absolute Necessities." *Philosophical Perspectives* 10: 93–117.
Talks about types of necessities, including metaphysical and logical necessity, and the distinction between relative and absolute necessities.
- Hawthorne, John (O'Leary-) (1996). "The Epistemology of Possible Worlds: A Guided Tour." *Philosophical Studies* 84: 283–302.
- Hayaki, Reina (2003). "Actualism and Higher-Order Worlds." *Philosophical Studies* 115: 149–78.
- (2006). "Contingent Objects and the Barcan Formula." *Erkenntnis* 64: 87–95.
Argues that the Williamson/Zalta view has certain unacceptable consequences, e.g. the "usual definition" of 'x is essentially F' as ' $\Box(x \text{ exists} \rightarrow Fx)$ ', must become ' $\Box(x \text{ is concrete} \rightarrow Fx)$ ', which then miscategorizes 'x is essentially concrete' as trivial. (The usual, conditional definition is only used because of contingent objects; can't Williamson just use the much more natural ' $\Box Fx$ '?)
- Hazen, Allen (1979). "Counterpart-Theoretic Semantics for Modal Logic." *Journal of Philosophy* 76: 319–38.
- Heller, Mark (1998). "Property Counterparts in Ersatz Worlds." *Journal of Philosophy* 95: 293–316.
- Hirsch, Eli (1986). "Metaphysical Necessity and Conceptual Truth." In French et al. (1986), 243–56.
- Jacobs, Jonathan D. (2010). "A Powers Theory of Modality: Or, How I Learned to Stop Worrying and Reject Possible Worlds." *Philosophical Studies* 151(2): 227–48.
Possible worlds, concrete or abstract as you like, are irrelevant to the truthmakers for modality—or so I shall argue in this paper. First, I present the neo-Humean picture of modality, and explain why those who

accept it deny a common sense view of modality. Second, I present what I take to be the most pressing objection to the neo-Humean account, one that, I argue, applies equally well to any theory that grounds modality in possible worlds. Third, I present an alternative, properties-based theory of modality and explore several specific ways to flesh the general proposal out, including my favored version, the powers theory. And, fourth, I offer a powers semantics for counterfactuals that each version of the properties-based theory of modality can accept, *mutatis mutandis*. Together with a definition of possibility and necessity in terms of counterfactuals, the powers semantics of counterfactuals generates a semantics for modality that appeals to causal powers and not possible worlds

Jubien, Michael (2007). "Analyzing Modality." In Dean W. Zimmerman (ed.), *Oxford Studies in Metaphysics*, volume 3, 99–139. Oxford: Oxford University Press.

— (2009). *Possibility*. Oxford: Oxford University Press.

Kment, Boris (2006). "Counterfactuals and the Analysis of Necessity." *Philosophical Perspectives* 20(1): 237–302.

Kratzer, Angelika (1977). "What 'Must' and 'Can' Must and Can Mean." *Linguistics and Philosophy* 1: 337–55.

Kripke, Saul (1972). "Naming and Necessity." In Donald Davidson and Gilbert Harman (eds.), *Semantics of Natural Language*, 253–355, 763–9. Dordrecht: D. Reidel. Revised edition published in 1980 as *Naming and Necessity* (Harvard University Press, Cambridge, MA).

Lewis, David (1968). "Counterpart Theory and Quantified Modal Logic." *Journal of Philosophy* 65: 113–26. Reprinted in Lewis 1983: 26–46.

— (1970). "Anselm and Actuality." *Noûs* 4: 178–88. Reprinted in Lewis 1983: 10–20.

— (1971). "Counterparts of Persons and their Bodies." *Journal of Philosophy* 68: 203–11. Reprinted in Lewis 1983: 26–46.

— (1973). *Counterfactuals*. Oxford: Blackwell.

— (1983). *Philosophical Papers, Volume 1*. Oxford: Oxford University Press.

- (1986). *On the Plurality of Worlds*. Oxford: Blackwell.
- (1992). “Critical Notice of Armstrong’s *A Combinatorial Theory of Possibility*.” *Australasian Journal of Philosophy* 70: 211–24. Reprinted in Lewis 1999: 196–214.
- (1999). *Papers in Metaphysics and Epistemology*. Cambridge: Cambridge University Press.

Lewy, Casimir (1976). *Meaning and Modality*. Cambridge: Cambridge University Press.

Linsky, Bernard and Edward N. Zalta (1994). “In Defense of the Simplest Quantified Modal Logic.” In Tomberlin (1994), 431–58.

— (1996). “In Defense of the Contingently Nonconcrete.” *Philosophical Studies* 84: 283–94.

Linsky, Leonard (1969). “Reference, Essentialism, and Modality.” *Journal of Philosophy* 66: 687–700.

The article first presents Quine’s arguments against quantified modal logic in a manner which gives them maximum clarity and force. The main consideration is that, from the point of view of the semantics of classical quantification theory, it makes no sense to quantify into referentially opaque contexts. Ways of overcoming Quine’s arguments are considered. (1) Frege’s recourse to intensions as values of the variables of quantified modal logic; (2) the recourse to descriptions, with their attendant scope differences, by Sulliyán and Fitch; (3) the recourse to substitutional quantification by Ruth Barcan Marcus. Alternative (1) is not necessary. Alternatives (2) and (3) must be predicated upon a clear semantics for quantified modal logic. Kripke’s semantics is considered for this role. It is argued that Kripke’s semantics vindicates Quine’s claim that quantified modal logic entails essentialism, but that this latter doctrine is intelligible.

Loux, Michael J. (ed.) (1979). *The Possible and the Actual*. Ithaca, NY: Cornell University Press.

Anthology of classic 60s-70s papers on possible worlds.

Loux, Michael J. and Dean W. Zimmerman (eds.) (2003). *Oxford Handbook of Metaphysics*. Oxford: Oxford University Press.

McGinn, Colin (1981). "Modal Reality." In Richard Healey (ed.), *Reduction, Time and Reality*, 143–88. Cambridge: Cambridge University Press.

McMichael, Alan (1983). "A Problem For Actualism About Possible Worlds." *Philosophical Review* 92: 49–66.

Melia, Joseph (2003). *Modality*. Central Problems of Philosophy. McGill-Queen's University Press.

Montague, Richard (1963). "Syntactical Treatments of Modality, with Corollaries on Reflexion Principles and Finite Axiomatizability." *Acta Philosophical Fennica* 16: 153–67. Reprinted in Montague 1974: 286–302.

Shows using Gödel-style reasoning that 'is necessary' cannot both be a predicate of sentences and also obey standard modal logic.

— (1974). *Formal Philosophy: Selected Papers of Richard Montague*. Ed. Richmond H. Thomason. New Haven: Yale University Press.

Murray, Adam and Jessica M. Wilson (2012). "Relativized Metaphysical Modality." In *Oxford Studies in Metaphysics*, 189. Oxford University Press.

Neale, Stephen (2000). "On a Milestone of Empiricism." In Alex Orenstein and Petr Kotatko (eds.), *Knowledge, Language and Logic*, 237–346. Dordrecht: Kluwer.

Useful discussion of Quine's criticisms of quantified modal logic, and also contains a valuable survey of the history of the development of modal logic.

Nolan, Daniel (1996). "Recombination Unbound." *Philosophical Studies* 84: 239–62.

— (2011). "The Extent of Metaphysical Necessity." *Philosophical Perspectives* 25: 313–39.

Nolan, Daniel and John [O'Leary-] Hawthorne (1996). "Reflexive Fictionalisms." *Analysis* 56: 23–32.

There is a class of fictionalist strategies (the reflexive fictionalisms) which appear to suffer from a common problem: the problem that the entities which are supposedly fictional turn out, by the lights of the fictionalist theory itself, to exist. The appropriate solution is to reject so-called

strong fictionalism in each case: that is, to reject the variety of fictionalism which takes appeal to the domain of fictional entities to provide an explanation or analysis of the operators or predicates with which the objects are systematically correlated.

Pap, Arthur (1958). *Semantics and Necessary Truth*. New Haven: Yale University Press.

Classic book that discusses the “conventionalist” theory of modality.

Parsons, Terence (1967). “Grades of Essentialism in Quantified Modal Logic.” *Noûs* 1: 181–91.

Peacocke, Christopher (1978). “Necessity and Truth Theories.” *Journal of Philosophical Logic* 7: 473–500.

Classic paper discussing how to give a truth-theoretic, rather than model-theoretic, semantic theory for modality.

— (1997). “Metaphysical Necessity: Understanding, Truth and Epistemology.” *Mind* 521–74.

— (1999). *Being Known*. Oxford: Clarendon Press.

Plantinga, Alvin (1976). “Actualism and Possible Worlds.” *Theoria* 42: 139–60. Reprinted in Loux 1979: 253–73.

— (1977). “Transworld Identity or Worldbound Individuals?” In Stephen Schwartz (ed.), *Naming, Necessity, and Natural Kinds*. Ithaca, NY: Cornell University Press. Reprinted in Plantinga 2003: 72–89.

— (1983). “On Existentialism.” *Philosophical Studies* 44: 1–20. Reprinted in Plantinga 2003: 158–75.

— (2003). *Essays in the Metaphysics of Modality*. Ed. Matthew Davidson. New York: Oxford University Press.

Quine, W. V. O. (1936). “Truth by Convention.” In O. H. Lee (ed.), *Philosophical Essays for A. N. Whitehead*, 90–124. New York: Longmans. Reprinted in Quine 1966: 70–99.

— (1951). “Two Dogmas of Empiricism.” *Philosophical Review* 60: 20–43. Reprinted in Quine 1953a: 20–46.

- (1953a). *From a Logical Point of View*. Cambridge, MA: Harvard University Press.
- (1953b). “Reference and Modality.” In Quine (1953a), 139–59.
- (1953c). “Three Grades of Modal Involvement.” In *Proceedings of the 11th International Congress of Philosophy*, volume 14, 65–81. Amsterdam: North-Holland. Reprinted in Quine 1966: 156–74.
- (1960). “Carnap and Logical Truth.” *Synthese* 12: 350–74. Reprinted in Quine 1966: 100–125.
- (1966). *The Ways of Paradox*. New York: Random House.
- (1976). “Worlds Away.” *Journal of Philosophy* 73: 859–63.
- Rea, Michael (ed.) (1997). *Material Constitution*. Lanham, MD: Rowman & Littlefield.
- Rini, A. A. and M. J. Cresswell (2012). *The World-Time Parallel: Tense and Modality in Logic and Metaphysics*. Cambridge: Cambridge University Press.
- Roca-Royes, Sonia (2011a). “Essential Properties and Individual Essences.” *Philosophy Compass* 6(1): 65–77.

According to Essentialism, an object’s properties divide into those that are essential and those that are accidental. While being human is commonly thought to be essential to Socrates, being a philosopher plausibly is not. We can motivate the distinction by appealing—as we just did—to examples. However, it is not obvious how best to characterize the notion of essential property, nor is it easy to give conclusive arguments for the essentiality of a given property. In this paper, I elaborate on these issues and explore the way in which essential properties behave in relation to other related properties, like sufficient-for-existence properties and individual essences.

- (2011b). “Essentialism Vis-à-Vis Possibilia, Modal Logic, and Necessitism.” *Philosophy Compass* 6(1): 54–64.

Pace Necessitism – roughly, the view that existence is not contingent – essential properties provide necessary conditions for the existence of objects. Sufficiency properties, by contrast, provide sufficient conditions, and individual essences provide necessary and sufficient conditions. This

paper explains how these kinds of properties can be used to illuminate the ontological status of merely possible objects and to construct a respectable possibilist ontology. The paper also reviews two points of interaction between essentialism and modal logic. First, we will briefly see the challenge that arises against S₄ from flexible essential properties; as well as the moves available to block it. After this, the emphasis is put on the Barcan Formula (BF), and on why it is problematic for essentialists. As we will see, Necessitism can accommodate both (BF) and essential properties. What necessitists cannot do at the same time is to continue to understanding essential properties as providing necessary conditions for the existence of individuals; against what might be for some a truism.

Rosen, Gideon (1990). "Modal Fictionalism." *Mind* 99: 327–54.

— (1993). "A Problem for Fictionalism for Possible Worlds." *Analysis* 53: 71–81.

Roy, Tony (1993). "Worlds and Modality." *Philosophical Review* 102: 335–62.

What is it in virtue of which metaphysically modal statements are true or false? Some appeal to quantification over possible worlds. But I suggest that there are reasons to wonder whether possible worlds (as developed by Lewis and by Plantinga) are even relevant to modal truth. I then argue that there is a sense in which possible worlds of a certain sort may be seen as relevant to modality. The "worlds" represent combinations allowable under fixed constraints. On my account, for metaphysical modality, the important constraints have to do with the actual structures of non-modal properties.

— (1995). "In Defense of Linguistic Ersatzism." *Philosophical Studies* 80: 217–42.

David Lewis admits that his modal realism is often met with an "incredulous stare". As an alternative, say a "world-story" is a maximal consistent set of sentences, and modal notions are analyzed in terms of them. Lewis argues that "ersatz" accounts of this sort are both circular and incorrect: circular because the analysis of consistency depends on modality; incorrect because world-stories fail to represent every way the world can be. Further, Patrick Grim and others argue that there are no maximal sets of sentences in the sort of language required. I respond that there are ways to resist these objections.

Russell, Jeffrey Sanford (2013a). “Actuality for Counterpart Theorists.” *Mind* 122(485): 85–134.

The counterpart theorist has a problem: there is no obvious way to understand talk about actuality in terms of counterparts. Fara and Williamson have charged that this obstacle cannot be overcome. Here I defend the counterpart theorist by offering systematic interpretations of a quantified modal language that includes an actuality operator. Centrally, I disentangle the counterpart relation from a related notion, a ‘representation relation’. The relation of possible things to the actual things they represent is variable, and an adequate account of modal language must keep track of the way it is systematically shifted by modal operators. I apply my account to resolve several puzzles about counterparts and actuality. In technical appendices, I prove some important logical results about this ‘representational’ counterpart system and its relationship to other modal systems

— (2013b). “On Where Things Could Be.” *Philosophy of Science* .

— (2013c). “Possible Worlds and the Objective World.” *Philosophy and Phenomenological Research* .

Salmon, Nathan (1986). “Modal Paradox: Parts and Counterparts, Points and Counterpoints.” In French et al. (1986), 75–120.

Shalkowski, Scott (1994). “The Ontological Ground of the Alethic Modality.” *Philosophical Review* 103: 669–88.

Shoemaker, Sydney (1998). “Causal and Metaphysical Necessity.” *Pacific Philosophical Quarterly* 79: 59–77.

Sidelle, Alan (1989). *Necessity, Essence and Individuation*. Ithaca, NY: Cornell University Press.

Recent philosophical work has been deeply influenced by a realistic understanding of modality, essence and individuation suggested by the discovery of necessary “a posteriori” truths. The present book argues that the necessary “a posteriori” and associated phenomena can be given a conventionalist account, and that on epistemological, metaphysical and semantic grounds, this account is superior to that of the realist. The legitimacy and need for appeals to analyticity is defended, and a semantic approach is sketched which, while acknowledging the important insights of

causal theorists of reference, incorporates the semantic structure needed to ground modality and individuation. Overall, the book is a contemporary defense of empiricist metaphysics and semantics.

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Alvin Plantinga gave a reductio of the conjunction of the following three theses: Existentialism (the view that, e.g., the proposition that Socrates exists can’t exist unless Socrates does), Serious Actualism (the view that nothing can have a property at a world without existing at that world) and Contingency (the view that some objects, like Socrates, exist only contingently). I sketch a view of truth at a world which enables the Existentialist to resist Plantinga’s argument without giving up either Serious Actualism or Contingency

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Modality presents notorious philosophical problems, including the epistemic problem of how we could come to know modal facts and metaphysical problems about how to place modal facts in the natural world. These problems arise from thinking of modal claims as attempts to describe modal features of this world that explain what makes them true. Here I propose a different view of modal discourse in which talk about what is “metaphysically necessary” does not aim to describe modal features of the world, but, rather, provides a particularly useful way of expressing constitutive semantic and conceptual rules in the object language. The result is a “modal normativist” view that enables us to avoid the epistemic problems of modality and mitigate the metaphysical worries, while also leaving open the possibility of a unified account of the function of modal language. Finally, I address a serious challenge: we have the norms we do in order to track the modal facts of the world, so that the order of explanation must go in the opposite direction. I close by showing how the normativist may answer that challenge

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