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HANDOUT

Section 1: Hegel and the Changing Terrain of Analytic Philosophy

1.1 The Official Story: Russell on Hegel

“Now the traditional logic holds that every proposition ascribes a predicate to a subject, and from this it easily follows that there can be only one subject, the Absolute, for if there were two, the proposition that there were two would not ascribe a predicate to either. Thus Hegel’s doctrine, that philosophical propositions must be of the form, “the Absolute is such-and-such.” depends upon the traditional belief in the universality of the subject–predicate form. This belief, being traditional, scarcely self-conscious, and not supposed to be important, operates underground, and is assumed in arguments which, like the refutation of relations, appear at first such as to establish its truth. This is the most important respect in which Hegel uncritically assumes the traditional logic.”
Bertrand Russell, *Our Knowledge of the External World* (London: Allen and Unwin, 1914), p. 48.

Countercurrents to Russell’s narrative: Modal Logic

1.2 C. I. Lewis: modal propositional logic

1912: “Implication and the Algebra of Logic”, *Mind* 21 (1912): 522–31.

1918: *A Survey of Symbolic Logic*, Berkeley: University of California Press.

1931: C. I. Lewis and C. H. Langford, *Symbolic Logic*, New York: Century.

“An assemblage or set of propositions may be such that all of them can be true at once. They are mutually compatible, compossible, consistent. There may be more than one such set. Whoever denies this on metaphysical grounds must assume the burden of proof. And whether, in fact, the possible and the actual, the consistent and the concurrently true-in-fact are identical, at least one must admit that our *concept* of the possible differs from our *concept* of the actual: that we *mean* by “consistent” something different from “concurrently true-in-fact”. Any set of mutually consistent propositions may be said to define a “possible situation” or “case” or “state of affairs”. And a propositions may be “true” of more than one such possible situation—may belong to more than one such set. Whoever understands “possible situation” thereby understands “consistent propositions”, and vice versa. And whoever understands “impossible situation” understands also “inconsistent propositions”. In these terms, we can translate p st-imp q by “Any situation in which p should be true and q false is impossible”. (C. I. Lewis, *A Survey of Symbolic Logic*, 333 (“st-imp” replaces Lewis’s “fishhook” symbol).

1.3 Saul Kripke: models for modal predicate logic.

1959: “A Completeness Theory in Modal Logic”, *Jnl of Symbolic Logic*, 1959.

1963: “Semantical considerations on modal logic”, *Acta Philosophica Fennica*, 1963.

1971: “Naming and Necessity” in D. Davidson and G. Harman, *The Semantics of Natural Language* (Reidel), republished with a new Preface as *Naming and Necessity* (Blackwell, 1980).

1.4 David Lewis: Possible-Worlds Pluralism / Possibilism / Modal Reductionism

1969: *Convention: A Philosophical Study* (Oxford: Blackwell)

1970: “Anselm and actuality”, *Nous*, 4: 113–26.

1973: *Counterfactuals* (Oxford: Blackwell)

1986: *On the Plurality of Worlds* (Oxford: Blackwell)

“I believe that there are possible worlds other than the one we happen to inhabit. If an argument is wanted it is this. It is uncontroversially true that things might be otherwise than they are. I believe, and so do you, that things could have been different in countless ways. But what does things mean? Ordinary language permits the paraphrase: there are many ways things could have been besides the way they actually are. On the face of it, this sentence is an existential quantification. It says that there exist many entities of a certain description, to wit ‘ways things could have been’. I believe that things could have been different in countless ways; I believe permissible paraphrases of what I believe; taking the paraphrase at its face value, I therefore believe in the existence of entities that

might be called ‘ways things could have been’. I prefer to call them ‘possible worlds’.” *Counterfactuals*, p. 84.

“You believe in our actual world already. I ask you to believe in more things of that kind, not in things of some new kind.” *Ibid.*, p. 87.

“My indexical theory of actuality exactly mirrors a less controversial doctrine about time. Our present time is only one time among others. We call it alone present not because it differs in kind from all the rest, but because it is the time we inhabit. The inhabitants of other times may truly call their own times ‘present’, if they mean by ‘present’ what we do; for the meaning we give to ‘resent’ is such that it is indexical, and refers at any time t to that time t itself.” *Ibid.*, p. 86.

1.5 Arthur Prior: Tense logic

1957: *Time and Modality*, Oxford: Clarendon Press

1967: *Past, Present and Future*, Oxford: Clarendon Press

1969: *Papers on Time and Tense*, Oxford: Clarendon Press.

1977: (with Kit Fine), *Worlds, Times and Selves*, London, Duckworth.

On the relation of tense and modal logic: A. A. Rini and M. J. Cresswell, *The World-Time Parallel* (Cambridge UP, 2012). On the history of possible world semantics: Jack Copeland, “The Genesis of Possible Worlds Semantics”, *Journal of Philosophical Logic*, 31 (2002), 99–137.

J. N. Findlay,

1941: “Time: A Treatment of Some Puzzles”, *Australasian Journal of Philosophy*, reprinted in Anthony Flew, *Logic and Language* (.

1958: *Hegel: A Re-examination* (London: Allen & Unwin).

1985: “My Life: 1903–1973” in Robert S. Cohen, Richard M. Martin and Merold Westphal (eds), *Studies in the Philosophy of J. N. Findlay* (Albany: State University of New York Press, 1985).

Findlay: “Stated in words these semantic rules might seem circular, but taught in connection with a concrete situation they are wholly clear. And our conventions with regard to tenses are so well worked out that we have practically the materials in them for a formal calculus.”

[“The calculus of tenses should have been included in the modern development of modal logics. It includes such obvious propositions as that

x present = (x present) present;

x future = (x future) present = (x present) future;

also such comparatively recondite propositions as that

(x). (x past) future; i.e., all events, past, present and future, *will* be past.” Fn 17.]

Where all is so desirably definite what room is there for puzzles and perplexities?

To give an answer to this question, we must point to a certain aspiration which all our language to some extent fulfills, and which we are at times inclined to follow to unreasonable lengths. We desire to have in our language only those kinds of statement that are *not* dependent, as regards their truth or falsity, on any circumstance in which the statement happens to be made”. P. 233.

Prior: “I find myself quite unable to take ‘instants’ seriously as individual entities... Tense logic is for me, if I may use the phrase, *metaphysically fundamental*, and not just an artificially torn-off fragment of the first-order theory of the earlier-later relation.” from Prior and Fine, *Worlds, Time and Selves* p. 37.

“It is not that modal logic or tense logic is an artificially truncated uniform monadic first-order predicate calculus; the latter, rather is an artificially expanded modal logic or tense logic.” *Ibid.*, p. 56.

“I wonder whether anybody wants to put forward anything like the following as a piece of serious metaphysics: There really are such objects as possible worlds, and what we loosely describe as propositions of modal logic are in fact predicates of which these objects are the subjects. ... [T]his seems a tall story ... I doubt whether anyone seriously believes it.” *Ibid.*, p. 92.

1.6 The translation between modal and non-modal logics

“Whereas modal languages take an internal perspective, classical languages, with their quantifiers and variable binding, are the prime example of how to take an *external* perspective on relational structures. In spite of this, there is a *standard translation* of any modal language into its corresponding classical language. This translation provides a bridge between the worlds of modal and classical logic.” Patrick Blackburn, Maarten de Rijke and Yde Venema, *Modal Logic* (Cambridge: Cambridge University Press, 2001)p. xiii.

“It has for a long time been evident that there are close structural analogies between modal logic and quantification theory ... What is the significance of these parallels? A possibility which immediately suggests itself is that the modal expressions ‘necessarily’ and ‘possibly’ are disguised quantifications of some sort ... It is much less usual to turn the parallels between modal logic and quantification in the opposite direction, and present quantification theory, or part of it, as being a disguised form of modal logic. Such a move, all the same, is in principle possible, and there is more to be said for it than one might at first imagine.” (Prior, *Worlds, Times and Selves*, 9–10).

1.7 Robert Stalnaker: Possible World Semantics without Possible Worlds

1976: “Possible Worlds”, *Nous* (1976), reprinted in Stalnaker 2003.

2003: *Ways a World Might Be: Metaphysical and Anti-Metaphysical Essays* (OUP)

2008: *Our Knowledge of the Internal World* (Oxford University Press).

2012: *Mere Possibilities: Metaphysical Foundations of Modal Semantics* (Princeton UP).

2014: *Context* (Oxford UP).

Modalism:

“According to John Divers ... “the primary question of conceptual application of the species of AR [actualist realism] is whether any affords a thoroughly non-modal analysis of the family of modal and intensional concepts”. ... But my view is that if an account of modality were to meet this condition that would be a sure sign that it was on the wrong track. Necessity and possibility are fundamental concepts, like truth and existence”. *Mere Possibilities: Metaphysical Foundations of Modal Semantics*. p. 4.

Section 2: Hegel’s Modal Actualism:

2.0 *Twentieth-century interpretations with relations to analytic philosophy*

Early: J. N. Findlay, *Hegel: A Re-Examination* (London: Allen and Unwin, 1958). Charles Taylor, *Hegel* (Cambridge: Cambridge University Press, 1975).

Typical recent “Post-Kantian” readings of Hegel:

Robert B Pippin, *Hegel’s Idealism: The Satisfactions of Self-Consciousness*. Cambridge: Cambridge University Press, 1989; *Hegel’s Practical Philosophy: Rational Agency as Ethical Life*. Cambridge University Press, 2008.

Terry Pinkard, *Hegel’s Phenomenology: The Sociality of Reason*. New York: Cambridge University Press, 1994; *Hegel’s Naturalism: Mind, Nature, and the Final Ends of Life*. New York: Oxford University Press, 2012.

Typical recent “revised metaphysical” readings:

Robert Stern, *Hegelian Metaphysics* (Oxford: Oxford University Press, 2009).

Christopher Yeomans, *Freedom and Reflection: Hegel and the Logic of Agency*. New York: Oxford University Press, 2012.

James Kreines, *Reason in the World: Hegel’s Metaphysics and Its Philosophical Appeal*. New York: Oxford University Press, 2015.

For further on the array of contemporary approaches to Hegel see my 2014: “Georg Wilhelm Friedrich Hegel”, *The Stanford Encyclopedia of Philosophy* (Spring 2014 Edition), Edward N. Zalta (ed.), URL = <<http://plato.stanford.edu/archives/spr2014/entries/hegel/>>. For further on the relations between the metaphysical and theological dimensions of Hegel’s thought see my “Some Metaphysical Implications of Hegel’s Theology”, *European Journal for Philosophy of Religion*, vol 4, no. 1 (Spring, 2012), pp. 139–150.

2.1 Hegel: Possibility as an abstract moment of actuality

“The notion of possibility appears initially to be the richer and more comprehensive determination, and actuality, in contrast, as the poorer and more restricted one. So we say, ‘Everything is possible, but not everything that is possible is on that account actual too.’ But, in fact, i.e., in thought, actuality is what is more comprehensive, because, being the concrete thought, it contains possibility within itself as an abstract moment. We find this accepted in our ordinary consciousness, too: for when we speak of the possible, as distinct from the actual, we call it ‘merely’ possible.” G. W. F. Hegel, *The Encyclopaedia Logic (EL)*, C. Actuality, § 143, addition.

C.f., Kripke: “What seems to be more objectionable is that this depends on the wrong way of looking at what a possible world is. One thinks, in this picture, of a possible world as if it were like a foreign country... A possible world isn’t like a distant country that we are coming across, or viewing through a telescope... A possible world is *given by the descriptive conditions we associate with it.*” (*Naming and Necessity*, 43–4).

C.f., Stalnaker: “A misleading picture sometimes accompanies the Lewis account of self-locating belief: belief about what possible world you are in is like belief about what country you are in, while beliefs about where in the world you are is like a more specific belief about where, in the country you are (what village, street corner, or mountain top). But ordinary belief about where you are in the world is always also belief about what possible world you are in (what possible state of the world is actual).” (*Our Knowledge of the Internal World*, 51).

Section 3. Lewis–Leibniz, Prior–Hegel and the interpretation of modal logic

3.1 Hegel on the shortcomings of traditional Aristotelian logic:

“The fact that it was necessary to make a completely fresh start with this science ... – The essential point to be kept in mind is that an altogether new concept of scientific procedure is at work here.” G. W. F. Hegel, *The Science of Logic (SL)*, trans. & ed., George di Giovanni, (Cambridge UP, 2010), p. 9.

“It must equally be granted that the customary exposition of the syllogism and of its particular configurations is not a *rational* cognition, not an exposition of them as *forms of reason*, and that syllogistic wisdom has by its own unworthiness brought up itself the disparagement that it has experienced.” *SL*, 605.

3.2 Leibniz, Ploucquet, algebraic logic and computationalism.

G. W. Leibniz, *Logical Papers: A selection translated and edited with an Introduction by G. H. R. Parkinson*, (OUP, 1966).

Wolfgang Lenzen, “Leibniz’s Logic”, in in Dov. M. Gabbay and John Woods (eds), *Handbook of the History of Logic*, vol 3 (Elsevier, 2004).

Gottfried Ploucquet, *Logik: Herausgegeben, übersetzt und mit einer Einleitung versehen von Michael Franz* (Georg Olms Verlag, 2006).

Wolfgang Lenzen, “Ploucquet’s ‘Refutation’ of the Traditional Square of Opposition”, *Logica Universalis* 2 (2008), pp. 43–58; “Der ‘logische Calcul Herrn Prof. Ploucquets’”, *Archiv für Geschichte der Philosophie* 90 (2008), pp. 74–114.

Witold Marciszewski and Roman Murawski, *Mechanization of Reasoning in a Historical Perspective* (Rodopi, 1995).

3.3 Leibniz and the interchangeability of intension and extension:

“The common manner of statement concerns individuals, whereas Aristotle’s refers rather to ideas or universals. For when I say *Every man is an animal* I mean that all the men are included amongst the animals; but at the same time I mean that the idea of animal is included in the idea of man. ‘Animal’ comprises more individuals than ‘man’ does, but ‘man’ comprises more ideas or more attributes: one has more instances, the other more degrees of reality; one has the greater extension, the other the greater intension.” (*New Essays on Human Understanding*, trans and eds, P. Remnant and J. Bennett (Cambridge University Press, 1996), 486.)

3.4 Leibniz, following Raue, on the *predicification* of subject terms.

Ignacio Angelelli, “On Johannes Raue’s Logic”, in Ingrid Marchlewitz and Albert Heinekamp, *Leibniz’ Auseinandersetzung mit Vorgängern und Zeitgenossen* (Stuttgart: Steiner, 1990), 184–93.
 Maria Rosa Antognazza, *Leibniz on the Trinity and the Incarnation: Reason and Revelation in the Seventeenth century*, trans. Gerald Parks (Yale UP, 2007), ch 2.

3.4 Hegel on Leibniz’s and Ploucquet’s mathematical logic in *Science of Logic*.

“The mathematical syllogism goes like this: if two things or two determinations are equal to a third, then they are equal to each other. The relation of inherence or subsumption of terms is done away with. ... The mathematical syllogism ranks in mathematics as an axiom, as a first self-explanatory proposition which is neither capable nor in need of proof, i.e., of any mediation – which neither presupposes anything else nor can be derived from anything else. – If we take a closer look at this prerogative that the proposition claims, of being immediately self-evident, we find that it lies in its formalism, in the fact that it abstracts from every qualitative diversity of determinations and admits their quantitative equality or inequality... Nor does the concept and its determinations enter into this syllogism; there is in it, therefore, not conceptual comprehension at all... The self-evidence of this syllogism rests, therefore, solely on the indigence and abstractness of its mode of thought”.
 (SL, 602–3)

“As I have remarked elsewhere, inasmuch as philosophy is to be science, it cannot borrow its method from a subordinate science, such as mathematics, any more than it can remain satisfied with categorical assurances of inner intuition, or can make use of argumentation based on external reflection.” (SL, 9.)

On Hegel’s attitude to formal logic see my “The Role of Logic “Commonly So Called” in Hegel’s *Science of Logic*”, *British Journal for the History of Philosophy*, vol. 22, no. 2 (2014), pp. 281–301.