PHILOSOPHY OF LOGIC

Time and Place: Thursdays 14:15-15:45, 23.02/U1.61
Instructor: Dr. Ioannis Votsis
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Office hours (Room Geb. 23.21/04.86): Thursdays 11:00-12:00

Broadly construed, logic offers purely formal standards of 'good' and 'bad' inferential relations and practices. Classical logic, for example, tells us that an inference is valid if and only if the truth of the premises guarantees the truth of the conclusion. The philosophy of logic takes a step back and asks various questions about logic itself. It is an ontological, epistemological, methodological and semantic investigation of logic. In this course we will attempt to throw light on a number of vital questions. Here's a sample: How can we best understand the relation of logical consequence? Should additional information be able to invalidate inferences that were once deemed valid? Why, if at all, would we want to adhere to the idea that anything follows from a contradiction? Can there be true contradictions? What are the bearers of truth? Are there any disadvantages to having degrees of truth? Does ordinary language conform to an existing system of logic? Should it so conform? Are there adequate counterparts of ordinary language quantifiers in logic? Can we get a logical grip on vagueness? What ought we to make of the existence of rival logical systems? Should we be instrumentalists with respect to logic? If not, is there one correct system of logic or many? If many, what is the range of application of each? Are there fundamental logical principles that are unrevisable? How are physical and logical modalities related? What do paradoxes tell us about logic? Finally, can we reason without logic?

Useful Books:
Haack, S. (1993) *The Philosophy of Logics*, Cambridge University Press.
Sainsbury, M. (2001) *Logical Forms: An Introduction to Philosophical Logic*, 2nd edition, Oxford: Blackwell.

Coursework:
- One presentation (about 20 minutes) on one of the main readings. [3 credits]
- One essay (about 2,500 words), **deadline 13/07/10**. [3 credits]

NB: Presentations will be assigned on the second week. Suggested essay topics will be distributed in May.

WEEK 1: Introduction

WEEK 2: What is the Philosophy of Logic?

Main Reading:
Haack, S. (1993) *Philosophy of Logics*, Cambridge University Press, ch. 1.

Further Reading:
Hintikka, J. and G. Sandu (2007) 'What is Logic?', in D. Jacquette (ed.), *Philosophy of Logic*, Amsterdam: Elsevier, pp. 13-40.
Hodges, W. (2007) 'The Scope and Limits of Logic', in D. Jacquette (ed.), *Philosophy of Logic*, Amsterdam: Elsevier, pp. 41-64.
Sainsbury, M. (2008) 'Philosophical Logic', in D. Moran (ed.) *The Routledge Companion to Twentieth-Century Philosophy*, New York: Routledge.

WEEK 3: The Relation of Logical Consequence

Main Reading:
Beall, J. C. and G. Restall (2005) 'Logical Consequence', Stanford Encyclopedia of
     Philosophy, http://plato.stanford.edu/entries/logical-consequence/

Further Reading:
Blanchette, P.A. (2001) 'Logical Consequence', in L. Goble (ed.), *The Blackwell
     Guide to Philosophical Logic*, Oxford: Blackwell Publishers, pp. 115-135.
Etchemendy, J. (1990) *The Concept of Logical Consequence*, Cambridge, MA:
     Harvard University Press.
Priest, G. (1999) 'Validity', *European Review of Philosophy*, vol. 4: 183–205.

WEEK 4: Logical Constants

Main Reading:
MacFarlane, J. (2009) 'Logical Constants', Stanford Encyclopedia of Philosophy,
     http://plato.stanford.edu/entries/logical-constants/

Further Reading:
Gomez-Torrente, M. (2002) 'The Problem of Logical Constants', *The Bulletin of
     Symbolic Logic*, vol. 8(1): 1-37.
Sainsbury, M. (2001) *Logical Forms*: *An Introduction to Philosophical Logic*, 2nd
     ed., Oxford: Blackwell Publishers, ch. 6.
Warmbrod, K. (1999) 'Logical Constants', *Mind*, vol. 108: 503–538.

WEEK 5: Truth

Main Reading:
Glanzberg, M. (2006) 'Truth', Stanford Encyclopedia of Philosophy,
     http://plato.stanford.edu/entries/truth/

Further Reading:
Candlish, S. and N. Damnjanovic (2007) 'A Brief History of Truth', in D. Jacquette
     (ed.), *Philosophy of Logic*, Amsterdam: Elsevier, pp. 227-324.
Kirkham, R. L. (1993) Theories of Truth: A Critical Introduction, Bradford: Bradford
     Books, ch. 2.
Wright, C. (1992) *Truth and Objectivity*, Cambridge: Cambridge University Press.

WEEK 6: Self-Reference Paradoxes

Main Reading:
Sainsbury, M. (2009) *Paradoxes*, Cambridge: Cambridge University Press, ch. 6.

Further Reading:
Bolander, T., V.F. Hendricks and S.A. Pedersen (eds.) (2006) *Self-Reference*,
     Stanford: CSLI Publications.
Haack, S. (1993) *Philosophy of Logics*, Cambridge University Press, ch. 8.
Yablo, S. (1993) 'Paradox without Self-Reference', *Analysis* 53: 251–252.

WEEK 7: Dialetheism

Main Reading:
Priest, G. and Berto, F. (2008) **'**Dialetheism', Stanford Encyclopedia of Philosophy,
    http://plato.stanford.edu/entries/dialetheism/

Further Reading:
Berto, F. (2007) *How to Sell a Contradiction. The Logic and Metaphysics of
    Inconsistency*, London: College Publications.
Da Costa, N.C.A. et. al. (2007) 'Paraconsistent Logics and Paraconsistency', in D.
    Jacquette (ed.), *Philosophy of Logic*, Amsterdam: Elsevier, pp. 791-912.
Priest, G. (2006) *In Contradiction*, 2nd edition, Oxford: Oxford University Press.

WEEK 8: The Logic of Ordinary Language

Main Reading:
Hitchcock, D. (2007) 'Informal Logic and the Concept of Argument', in D. Jacquette
    (ed.), *Philosophy of Logic*, Amsterdam: Elsevier, pp. 101-131.

Further Reading:
Barwise, J. and R. Cooper, R. (1981) 'Generalized quantifiers and natural language',
    Linguistics and Philosophy, vol. 4: 159-219.
Groarke, L. (2007) 'Informal Logic', *Stanford Encyclopedia of Philosophy*,
    http://plato.stanford.edu/entries/logic-informal/
Peters, S. and D. Westerståhl (2002) 'Does English Really have Resumptive
    Quantification?' in D. Beaver et al. (eds.), *The Construction of Meaning*,
    Stanford: CSLI Publications, pp. 181-195.

WEEK 9: Monotonic vs. Non-Monotonic Accounts of Reasoning

Main Reading:
Horty, J. F. (2001) 'Nonmonotonic Logic', in L. Goble (ed.), *The Blackwell Guide to
    Philosophical Logic*, Oxford: Blackwell Publishers, pp. 336-361.

Further Reading:
Antonelli, G. A. (2006) 'Non-monotonic Logic', *Stanford Encyclopedia of
    Philosophy*, http://plato.stanford.edu/entries/logic-nonmonotonic/
Gabbay, D., Hogger, C., and Robinson, J., (eds.), 1994, *Handbook of Logic in
    Artificial Intelligence and Logic Programming*, volume 3, Oxford and New
    York: Oxford University Press.
McCarthy, J. and P.J. Hayes (1969) 'Some Philosophical Problems from the
    Standpoint of Artificial Intelligence', in B. Meltzer et al. (eds.), Machine
    Intelligence 4, Edinburgh: Edinburgh University Press.

WEEK 10: Vagueness

Main Reading:
Sorensen, R. (2006) 'Vagueness', *Stanford Encyclopedia of Philosophy*,
    http://plato.stanford.edu/entries/vagueness/

Further Reading:
Graff, D. and T. Williamson (eds.) (2002) *Vagueness*, Aldershot: Ashgate Publishing.
Merricks, T. (2001) 'Varieties of Vagueness', *Philosophy and Phenomenological Research*, LXIII: 145-157.
Sorensen, R. A. (2007) 'Vagueness and the Logic of Ordinary Language' in D. Jacquette (ed.), *Philosophy of Logic*, Amsterdam: Elsevier, pp. 155-172.

WEEK 11: Modal Logic

Main Reading:
Grayling, A. C. (1997) *An Introduction to Philosophical Logic*, 3rd edition, Oxford: Blackwell Publishers, ch. 3.

Further Reading:
Cresswell, M. J. (2001) 'Modal Logic', in L. Goble (ed.), *The Blackwell Guide to Philosophical Logic*, Oxford: Blackwell Publishers, pp. 136-158.
Garson, J.W. (2006) *Modal Logic for Philosophers*, Cambridge: Cambridge University Press.
Goldblatt, R. (2006) 'Mathematical Modal Logic: a View of its Evolution' in D. Gabbay and J. Woods (eds.), *Handbook of the History of Logic*, vol. 6, Amsterdam: Elsevier.

WEEK 12: Monism vs. Pluralism

Main Reading:
Resnik, M. (1996) 'Ought There to be but One Logic?', in B. J. Copeland (ed.), *Logic and Reality*: *Essays on the Legacy of Arthur Prior*, Clarendon, Oxford, 489–517.

Further Reading:
Beall, J.C. and Restall, G. (2000) 'Logical Pluralism', *Australasian Journal of Philosophy*, vol. 78, No. 4, pp. 475–493.
Priest, G. (2001) 'Logic: One or Many?', in B. Brown and J. Woods (eds.) *Logical Consequences*, Dordrecht: Kluwer, forthcoming.
Schurz, G. (1997) *The Is-Ought Problem*: *An Investigation in Philosophical Logic*, Kluwer, Dordrecht.

WEEK 13: The Law of Non-Contradiction

Main Reading:
Bueno, O. and Colyvan, M. (2004) 'Logical Non-Apriorism and the "Law" of Non-Contradiction', in G. Priest, J.C. Beall, and B. Armour-Garb (eds.), *The Law of Non-Contradiction*: *New Philosophical Essays*, Oxford University Press, pp. 156–75.

Further Reading:
Lewis, D. (1982) 'Logic for Equivocators', *Noûs*, vol 16: 431-441.
Sainsbury, M. (2009) *Paradoxes*, Cambridge: Cambridge University Press, ch. 7.
Votsis, I. (draft) 'In Defence of the Law of Non-Contradiction'.

WEEK 14: Normativity of Logic

Main Reading:
Field, H. and P. Milne (2009) 'The Normative Role of Logic', *Proceedings of the Aristotelian Society*, supplementary volume LXXXIII: 251-268.

Further Reading:
Harman, G. (1986) *Change in View*: *Principles of Reasoning*, Cambridge, MA: MIT Press.
MacFarlane, J. (pre-print) 'In What Sense (if any) is Logic Normative for Thought?'.
Sainsbury, M. (2002) 'What logic should we think with?' in A. O'Hear (ed.), *Logic, Thought and Language*, Cambridge: Cambridge University Press.

WEEK 15: Is there a Logic of Induction?

Main Reading:
Howson, C. (1997) 'A Logic of Induction', *Philosophy of Science* 64, 268-290.

Further Reading:
Fitelson, B. (2005) 'Inductive Logic', in J. Pfeifer and S. Sarkar (eds.), *The Philosophy of Science*: *An Encyclopedia*, Oxford: Routledge, pp. 384-394.
Hawthorne, J. (2008) 'Inductive Logic', *Stanford Encyclopedia of Philosophy* http://plato.stanford.edu/entries/logic-inductive/
Norton, J.D. (2003) 'A Material Theory of Induction', *Philosophy of Science*, vol. 70(4): 647-670.