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## Philosophy of Language: Modality

Phil 6710/Ling 6634  
Spring 2012, Cornell University

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<b>Time:</b>	4:30-6:30pm, Monday
<b>Place:</b>	Goldwin Smith Hall 156
<b>Website:</b>	<a href="#">Blackboard</a> (Open enrollment)
<b>Professor:</b>	William Starr (will.starr@cornell.edu)
<b>Office:</b>	Goldwin Smith Hall, Office 237
<b>Office Hours:</b>	Fridays, 2-3pm

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### Course Description:

A simple view of how language works is that sentences name facts and communication works by exchanging names for those facts. Philosophers and linguists have long puzzled about which facts could play this role for modal sentences, e.g. *Alice **could** be home*, *Bob **may** not murder innocents* or *The lights **would** be on **if** Alice **had** been home*. These puzzles have motivated most to postulate modal facts (facts not just about how the world *is*, but about ways it *could be*). Some have suggested a relativist conception of some of these facts (they may be true of one person but not another). Others have attempted to develop a more nuanced picture of how modals are used to express ourselves (expressivism). This course will begin with classic approaches to modal semantics from modal logic, Lewis, Stalnaker and Kratzer. The remainder of the course will be devoted to examining problems for the classic accounts and more contemporary solutions to those problems. We will consider an account of the modal facts behind counterfactuals that builds on the causal models (Pearl, Hitchcock a.o.) used widely in AI and philosophy of science. After surveying approaches to epistemic and deontic modality, we will consider an expressivist account developed using the tools of dynamic semantics. We will conclude by examining the semantics of imperative sentences, e.g. *Dance!*, and motivating a similar approach.

This course will inevitably involve a lot of formal logic, but my aim is to provide the necessary technical background, and balance intuitive and mathematical descriptions of the material covered. It is my hope that this will make it accessible to ethicists, epistemologists and metaphysicians, as well as linguists who have not already worked on the semantics of modality. Auditors are welcome to attend whichever sessions appeal to their interests.

### Textbook:

All readings will be made available electronically on Blackboard.

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## Grading:

All non-auditors must do the following work.

- **Weekly Responses (26%)** Almost every week you are required to write up a short (400 words or less) response to the assigned reading. This response should detail the questions, challenges or unclarities you found most pressing in your reading that week. Your responses will be submitted as Journals on Blackboard and will only be viewable by yourself and the instructor. They are due at 10am on every Monday unless otherwise indicated on the schedule below.
- **Homework (30%)** 1 multi-part homework question will be given each week. Answers to these questions will be collected three times during the semester, as indicated in the schedule below. These homework questions will require you to understand how to apply the formal theories discussed in the seminar to evaluate their application to natural language. Students are encouraged to work together on homework.
  - I will meet with the non-auditors once a week for a supplementary discussion of the technical material covered in the course. We will meet on Fridays from 1-2pm, beginning 02.10.12.
- **Term Paper (44%)** 3000-5500 word term paper. Topics will be offered, but students are free to propose their own. Proposals must be made via email by May 6th. An outline of the paper is due by May 11th. The paper is due on May 18th, though I am happy to discuss extensions. Students are encouraged to make an appointment to discuss their outline with me.

**Schedule** (unmarked: required, \*: recommended, †: historical, °: advanced)

Date	Notes	Reading	Topics
<i>Week 1</i> 01.23	(No Response)	[30: 1-17, 25-37]*	<i>Semantics Background, Overview</i>
<i>Week 2</i> 01.30		[26: Ch.2], [30: 133-58]*, [19]†, [18]†, [2]°	<i>Modal Logic and Natural Language</i> Modal Logic and English
<i>Week 3</i> 02.06		[17], [16]*, [26: §3.1]*	<i>Kratzer</i> Beyond Modal Logic

Date	Notes	Reading	Topics
Week 4 02.13		[32], [20: §§1, 2.6, 3, 4], [30: Ch.8]*, [36] <sup>o</sup> , [11]†	<i>Lewis &amp; Stalnaker</i> Counterfactuals
Week 5 02.20		[5], [39], [21]*, [41] <sup>o</sup> , [34: Ch.7]*	<i>Objections to Lewis &amp; Stalnaker</i> What is similarity?
Week 6 02.27		[23], [13]*, [24: Ch.7] <sup>o</sup>	<i>Structural Equations</i> Pearl on Counterfactuals
Week 7 03.05	HW1 Due	[33], [38]*, [10] <sup>o</sup>	<i>Conditionals</i> Uniform Theories
Week 8 03.12		[4], [7]*, [3]†	<i>Epistemic Modality I</i> Basics, Relativism
Week 9 03.19	(No Response)		<i>Spring Break</i> No Class
Week 10 03.26		[45], [44]*, [9]†	<i>Epistemic Modality II</i> Expressivism
Week 11 04.02		[6], [26: §3.2]*, [8]*, [40] <sup>o</sup>	<i>Epistemic Modality III</i> Dynamic Expressivism?
Week 12 04.09		[22], [42]†	<i>Deontic Modality I</i> Puzzles of Deontic Logic
Week 13 04.16		[14], [31]*, [1]*	<i>Deontic Modality II</i> Free Choice
Week 14 04.23		[25], [15: §2.3], [27] <sup>o</sup> , [28]†	<i>Imperatives</i> Property Theory, Modal Theory
Week 15 04.30	HW2 Due	[37]*, [12]†, [43]†	<i>Imperatives</i> Dynamic Preference Semantics
Week 16 05.11	Paper Outline Due		<i>Exams/Study Week</i>
Week 17 05.18	Paper Due		<i>Exams</i>

## References

- [1] ALONI, M (2007). ‘Free Choice, Modals and Imperatives.’ *Natural Language Semantics*, **15**: 65–94.
- [2] BLACKBURN, P & VAN BENTHEM, J (2007). ‘Modal Logic: a semantic perspective.’ In JVB PATRICK BLACKBURN & F WOLTER (eds.), *Handbook of Modal Logic*, vol. 3 of *Studies in Logic and Practical Reasoning*, 1 – 84. Elsevier. URL <http://www.sciencedirect.com/science/article/pii/S1570246407800048>.
- [3] DEROSE, K (1991). ‘Epistemic Possibilities.’ *The Philosophical Review*, **107(2)**: 581–605.
- [4] EGAN, A, HAWTHORNE, J & WEATHERSON, B (2005). ‘Epistemic Modals in Context.’ In G PREYER & G PETER (eds.), *Contextualism in Philosophy*, 129–168. New York: Oxford University Press.
- [5] FINE, K (1975). ‘Review of Lewis’ *Counterfactuals*.’ *Mind*, **84**: 451–8.
- [6] VON FINTEL, K & GILLIES, AS (2007). ‘An Opinionated Guide to Epistemic Modality.’ In TS GENDLER (ed.), *Oxford Studies in Epistemology*, vol. 2, 32–62. New York: Oxford University Press. URL <http://mit.edu/fintel/www/fintel-gillies-ose2.pdf>.
- [7] VON FINTEL, K & GILLIES, AS (2008). ‘Cia leaks.’ *Philosophical Review*, **117(1)**. URL [http://semanticsarchive.net/Archive/zczZDQ4N/cia\\_leaks.pdf](http://semanticsarchive.net/Archive/zczZDQ4N/cia_leaks.pdf).
- [8] VON FINTEL, K & GILLIES, AS (2011). ‘*Might Made Right*.’ In A EGAN & B WEATHERSON (eds.), *Epistemic Modality*, 108–130. Oxford University Press. URL <http://semanticsarchive.net/Archive/TAyZGY2Z/mmr.pdf>.
- [9] GIBBARD, A (1986). ‘An Expressivistic Theory of Normative Discourse.’ *Ethics*, **96(3)**: 472–85.
- [10] GILLIES, A (2009). ‘On Truth-Conditions for *If* (but Not Quite Only *If*).’ *Philosophical Review*, **118(3)**: 325–349. URL <http://rci.rutgers.edu/~thony/truth-conditions-if-phil-review-2009.pdf>.
- [11] GOODMAN, N (1947). ‘The Problem of Counterfactual Conditionals.’ *The Journal of Philosophy*, **44**: 113–118.
- [12] HARE, RM (1967). ‘Some Alleged Differences Between Imperatives and Indicatives.’ *Mind*, **76(303)**: 309–326. URL <http://www.jstor.org/stable/2251842>.
- [13] HIDDLESTON, E (2005). ‘A Causal Theory of Conditionals.’ *Noûs*, **39(4)**: 632–657.
- [14] KAMP, H (1973). ‘Free Choice Permission.’ *Proceedings of the Aristotelian Society*, **74**: 57–74. URL <http://www.jstor.org/stable/4544849>.
- [15] KAUFMANN, MS (2012). *Interpreting Imperatives*. Studies in Linguistics and Philosophy. New York: Springer.
- [16] KRATZER, A (1977). ‘What ‘Must’ and ‘Can’ Must and Can Mean.’ *Linguistics*

## REFERENCES

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- and Philosophy*, **1(3)**: 337–356.
- [17] KRATZER, A (1981). ‘The Notional Category of Modality.’ In HJ EIKMEYER & H RIESER (eds.), *Words, Worlds and Contexts*, 38–74. Berlin: Walter de Gruyter.
- [18] KRIPKE, SA (1959). ‘A Completeness Theorem in Modal Logic.’ *Journal of Symbolic Logic*, **24(1)**: 1–14.
- [19] LEWIS, CI (1914). ‘The Calculus of Strict Implication.’ *Mind*, **23(90)**: 240–247. URL <http://www.jstor.org/stable/2248841>.
- [20] LEWIS, DK (1973). ‘Counterfactuals and Comparative Possibility.’ *Journal of Philosophical Logic*, **2(4)**: 418–446.
- [21] LEWIS, DK (1979). ‘Counterfactual Dependence and Time’s Arrow.’ *Noûs*, **13**: 455–476.
- [22] MCNAMARA, P (2010). ‘Deontic Logic.’ In EN ZALTA (ed.), *The Stanford Encyclopedia of Philosophy*, summer 2010 edn. URL <http://plato.stanford.edu/archives/sum2010/entries/logic-deontic/>.
- [23] PEARL, J (2002). ‘Reasoning with Cause and Effect.’ *AI Magazine*, **23(1)**: 95–112. URL [http://ftp.cs.ucla.edu/pub/stat\\_ser/r265-ai-mag.pdf](http://ftp.cs.ucla.edu/pub/stat_ser/r265-ai-mag.pdf).
- [24] PEARL, J (2009). *Causality: Models, Reasoning, and Inference*. 2nd edn. Cambridge, England: Cambridge University Press.
- [25] PORTNER, P (2004). ‘The Semantics of Imperatives within a Theory of Clause Types.’ In K WATANABE & RB YOUNG (eds.), *Proceedings from Semantics and Linguistic Theory 14*, 235–252. Ithaca, NY: CLC Publications. URL <http://semanticsarchive.net/Archive/mJlZGQ4N/PortnerSALT04.pdf>.
- [26] PORTNER, P (2009). *Modality*. New York: Oxford University Press.
- [27] PORTNER, P (2010). ‘Permission and Choice.’ Ms. Georgetown University, URL [http://semanticsarchive.net/Archive/jI1YjMyY/Permission\\_Choice\\_Portner.pdf](http://semanticsarchive.net/Archive/jI1YjMyY/Permission_Choice_Portner.pdf).
- [28] ROSS, A (1941). ‘Imperatives and Logic.’ *Theoria*, **25(7)**: 53–71. Page references to reprint Ross [29].
- [29] ROSS, A (1944). ‘Imperatives and Logic.’ *Philosophy of Science*, **11(1)**: 30–46. URL <http://www.jstor.org/stable/184888>.
- [30] SIDER, T (2010). *Logic for Philosophy*. New York: Oxford University Press.
- [31] SIMONS, M (2005). ‘Dividing Things Up: The Semantics of *or* and the Modal/*or* Interaction.’ *Natural Language Semantics*, **13(3)**: 271–316.
- [32] STALNAKER, RC (1968). ‘A Theory of Conditionals.’ In N RESCHER (ed.), *Studies in Logical Theory*, 98–112. Oxford: Basil Blackwell Publishers.
- [33] STALNAKER, RC (1975). ‘Indicative Conditionals.’ *Philosophia*, **5**: 269–286. Page references to reprint in Stalnaker [35].
- [34] STALNAKER, RC (1984). *Inquiry*. Cambridge, Massachusetts: The MIT Press.
- [35] STALNAKER, RC (1999). *Context and Content: Essays on Intentionality in Speech and Thought*. Oxford: Oxford University Press.
- [36] STALNAKER, RC & THOMASON, RH (1970). ‘A Semantic Analysis of Condi-

## REFERENCES

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- tional Logic.’ *Theoria*, **36**: 23–42.
- [37] STARR, WB (2012). ‘A Preference Semantics for Imperatives.’ Ms. Cornell University.
- [38] STARR, WB (2012). ‘A Uniform Theory of Conditionals.’ Ms. Cornell University.
- [39] TICHÝ, P (1976). ‘A Counterexample to the Stalnaker-Lewis Analysis of Counterfactuals.’ *Philosophical Studies*, **29**: 271–273.
- [40] VELTMAN, F (1996). ‘Defaults in Update Semantics.’ *Journal of Philosophical Logic*, **25(3)**: 221–261. URL <http://www.pgrim.org/philosophersannual/xix/velt/index.htm>.
- [41] VELTMAN, F (2005). ‘Making Counterfactual Assumptions.’ *Journal of Semantics*, **22**: 159–180. URL <http://staff.science.uva.nl/~veltman/papers/FVeltman-mca.pdf>.
- [42] VON WRIGHT, GH (1951). ‘Deontic logic.’ *Mind, New Series*, **60(237)**: 1–15.
- [43] WILLIAMS, BAO (1963). ‘Imperative Inference.’ *Analysis*, **23(Supplement 1)**: 30–42. URL <http://www.jstor.org/stable/3326619>.
- [44] YALCIN, S (2007). ‘Epistemic modals.’ *Mind*, **116(464)**.
- [45] YALCIN, S (2011). ‘Nonfactualism about Epistemic Modality.’ In A EGAN & B WEATHERSON (eds.), *Epistemic Modality*. New York: Oxford University Press. URL <http://mit.edu/yalcin/www/nfem.pdf>.