

ESSLI



Twentieth



European Summer School



2008

**in Logic, Language
and Information**



Introduction to the Logic of Conditionals

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ESSLLI 2008

20th European Summer School in Logic, Language and Information

4–15 August 2008

Freie und Hansestadt Hamburg, Germany

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ESSLLI 2008 is organized by the Universität Hamburg under the auspices of the *Association for Logic, Language and Information* (FoLLI). The *Institute for Logic, Language and Computation* (ILLC) of the *Universiteit van Amsterdam* is providing important infrastructural support. Within the Universität Hamburg, ESSLLI 2008 is sponsored by the Departments *Informatik*, *Mathematik*, *Philosophie*, and *Sprache, Literatur, Medien I*, the *Fakultät für Mathematik, Informatik und Naturwissenschaften*, the *Zentrum für Sprachwissenschaft*, and the *Regionales Rechenzentrum*. ESSLLI 2008 is an event of the *Jahr der Mathematik 2008*. Further sponsors include the *Deutsche Forschungsgemeinschaft* (DFG), the Marie Curie Research Training Site GLoRiClass, the European Chapter of the Association for Computational Linguistics, the *Hamburgische Wissenschaftliche Stiftung*, the Kurt Gödel Society, Sun Microsystems, the Association for Symbolic Logic (ASL), and the European Association for Theoretical Computer Science (EATCS). The official airline of ESSLLI 2008 is Lufthansa; the book prize of the student session is sponsored by *Springer Verlag*.

Paul Egré and Mikaël Cozic

Introduction to the Logic of Conditionals

Course Material. 20th European Summer School in Logic, Language and Information (ESSLLI 2008), Freie und Hansestadt Hamburg, Germany, 4–15 August 2008

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Introduction to the logic of conditionals

ESSLLI 2008
Week 1 - August 4-8

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Description of the course

Welcome to the ESSLLI 2008 course “Introduction to the logic of conditionals.” This course is *foundational*, which means that our aim is to provide an accessible introduction to the logic of conditionals, suitable for students coming from different disciplines, whether logic, natural language semantics, computer science, or philosophy. Our ambition is to provide you with the basic tools that have become standard in any discussion of conditionals in natural language, in particular in the areas of philosophical logic and natural language semantics. More than that, our goal is to lead you as efficiently as possible to the aspects of the study of conditionals that are particularly active today and could become an object of further research for you.

The course does not presuppose prior knowledge of conditional logics. The only background we assume is some knowledge of classical logic, namely propositional and first-order logic. Some previous knowledge of modal logic will help, but is not required. Because the starting point of any analysis of conditionals is also the simplest, however, namely the truth-functional analysis in terms of material conditional, even those who would have had little exposure to logic (as opposed to linguistics, in particular) are welcome to attend the class.

In the present document, we only provide a day-by-day description of the course and a list of suggested readings. The slides of the course will be made available online by the time of the course, at the following address :

http://paulegre.free.fr/Teaching/ESSLLI_2008/index.htm

Initially, our goal was to provide a comprehensive reader, containing all the papers that are on our reading list. Because of copyright issues, however, and for the sake of efficiency, we decided to only link the papers, whenever possible. Some additional papers, which are particularly hard to find even online, will be made available to participants of the class upon request (at the time of the conference).

Our hope is that you will enjoy the course and find it useful. We are working on it !

Mikaël Cozic and Paul Égré

The course day by day

Remember that the list of suggested readings is only suggestive : it means that you are not supposed to have read all the indicated papers in advance. Rather, the course will prime you on aspects of the papers that you can focus on more comfortably and more efficiently in attending the class.¹

Monday, August 4 : The Stalnaker-Lewis analysis of conditionals

- Review of the strengthes and inadequacies of the material conditional analysis of NL conditionals. Stalnaker’s analysis in terms of selection functions. The limit and unicity assumptions (Lewis). Intermediate systems in terms of correspondence functions. Adjudicating between Stalnaker and Lewis’s systems. Problems for both analyses. Recent generalizations : Girard’s analysis, Schlenker’s analysis.

Basic reading	<ul style="list-style-type: none"> • Robert Stalnaker 1968, “A Theory of Conditionals”, in W. Harper, R. Stalnaker and G. Pearce (eds), <i>Ifs</i>, pp. 41-55. (available from the instructors, or on Google Scholar).
Further reading	<ul style="list-style-type: none"> • David Lewis (1973), “Counterfactuals and Comparative Similarity”, <i>Journal of Philosophical Logic</i> 2 :4, pp. 418-446, http://www.springerlink.com/content/f3536272w2771x33/
Recent perspectives	<ul style="list-style-type: none"> • P. Schlenker (2003), “Conditionals as definite descriptions” http://www.linguistics.ucla.edu/people/schlenker/Conditionals.pdf • P. Girard (2006), “From Onions to Broccoli : Generalizing Lewis’s Counterfactual Logic” http://www.stanford.edu/~pgirard/jancl-paper.pdf

Tuesday, August 5 : Conditionals as restrictors

- Are conditionals binary connectives? The Lewis-Kratzer analysis of conditionals as adverbials restrictors. Kratzer’s “doubly-relative” analysis of modals. Interaction between quantifiers and conditionals. Gibbard’s riverboat example. Iatridou and von Fintel’s counterexamples.

Basic reading	<ul style="list-style-type: none"> • David Lewis 1975, “Adverbs of Quantification”, repr. in D. Lewis, <i>Papers in Philosophical Logic</i>, Cambridge UP. • Angelika Kratzer 1991, “Conditionals”, in A. von Stechow and D. Wunderlich (eds.), <i>Semantics : an International Handbook of Contemporary Research</i>, pp. 639-650. (available from the instructors).
Further reading	<ul style="list-style-type: none"> • Allan Gibbard 1980, “Two Theories of Conditionals”, in W. Harper, R. Stalnaker and G. Pearce (eds), <i>Ifs</i> (available from the instructors).
Recent perspectives	<ul style="list-style-type: none"> • Kai von Fintel & Sabine Iatridou (2002), “If and When If-Clauses can restrict Quantifiers” http://web.mit.edu/fintel/www/lpw.mich.pdf

¹Disclaimer and warning : all the links we provide to papers are *open* links to material available from the internet. Some of these links may only be functional if your home institution has a subscription to the journal.

Wednesday, August 6 : Conditionals and Rational Belief Change

• Probabilistic and set-theoretic views of rational belief change. The AGM framework of belief dynamics. The Ramsey test. Probability of conditionals and conditional probability. Adams's Thesis. Adams's probabilistic logic and its relationship with Stalnaker's semantics. Assertion and conditionals.

Basic Reading	• E. Adams (1998), <i>A Primer of Probability Logic</i> [chapters 6 and 7], CSLI Publications, Stanford.
Further Reading	• Jackson, F. (1979) "On Assertion and Indicative Conditionals", <i>The Philosophical Review</i> , vol.88, n°4, pp. 565-89 (available from JSTOR).
Recent perspectives	• S. Kaufmann (2004), "Conditioning against the Grain : Abduction and Indicative Conditionals", <i>Journal of Philosophical Logic</i> 33 :583-606, http://ling.northwestern.edu/~kaufmann/Offprints/JPL_2004_Grain.pdf

Thursday, August 7 : Triviality Results and their implications

• Lewis's Triviality Results. Gärdenfors's qualitative version of the triviality results. Conditionalization vs. imaging. Three responses to triviality results : (i) the No-Truth Value conception (Edgington), (ii) contextualist semantics (Bradley), (iii) refinement of probabilistic logic (McGee). Connections with conditionals as modality restrictors.

Basic Reading	• D. Lewis (1976), "Probability of Conditionals and Conditional Probability", <i>The Philosophical Review</i> , Vol. 85, No. 3. (Jul., 1976), pp. 297-315.(available from JSTOR).
Further Reading	• D. Edgington (1995), "On Conditionals", <i>Mind</i> , vol. 104, n°414, 1995, pp. 235-329.(available from JSTOR). • V. McGee (1989), "Conditional Probabilities and Compounds of Conditionals", <i>The Philosophical Review</i> , vol.98, No.4., pp. 485-541.(available from JSTOR).
Recent Perspectives	• R. Bradley (2002), "Indicative Conditionals", <i>Erkenntnis</i> 56 : 345-378, 2002, http://www.springerlink.com/content/n4qq7nm3xg511cxy/fulltext.pdf .

Friday, August 8 : Counterfactual Conditionals

• Dualist vs. unified theories of indicative and subjunctive conditionals. Counterfactuality as implicature or as presupposition. Stalnaker's pragmatic constraint. Tense and mood in counterfactuals. Dynamic semantics for counterfactuals (Veltman).

Basic Reading	<ul style="list-style-type: none">• R. Stalnaker (1975), "Indicative Conditionals", <i>Philosophia</i> 5, repr. in R. Stalnaker <i>Context and Content</i>, Oxford 1999, http://www.springerlink.com/content/u543308t7871g193/fulltext.pdf.
Further Reading	<ul style="list-style-type: none">• K. von Stechow (1997), "The Presupposition of Subjunctive Conditionals", <i>MIT Working Papers in Linguistics</i>, O. Percus & U. Sauerland (eds.), mit.edu/fintel/www/subjunctive.pdf
Recent perspectives	<ul style="list-style-type: none">• S. Iatridou (2000), "The Grammatical Ingredients of Counterfactuality", <i>Linguistic Inquiry</i>, vol. 31, 2, 231-270.• F. Veltman (2005), "Making Counterfactual Assumptions", <i>Journal of Semantics</i> 22 : 159-180, http://staff.science.uva.nl/~veltman/papers/FVeltman-mca.pdf

Note : For reasons of time and coherence, we decided not to include material on so-called relevance or "biscuit" conditionals (conditionals of the form "if you are hungry, there are biscuits in the kitchen"). We will be happy to provide reference about those, but may not have the time to talk about them in great detail.