

# *The semantic anatomy of conditional sentences*

VENI proposal – laymen summary

**The meaning of conditional sentences**, i.e. sentences of the form *If ..., then ...*, has fascinated many thinkers since ancient times. What does a conditional talk about? How can we be sure that is true? Can it be true? The charm conditionals exert can be explained by their intrinsic relation to a number of central scientific problems, like the nature of reasoning, the possibility of knowledge, laws of nature, causality and many more. This fascination has led to an intense debate on the meaning of conditional sentences *in abstracto* that hasn't reached firm conclusions yet. In this debate only marginal attention has been bestowed on the following important question: how is the meaning of these sentences related to the concrete form conditionals take in the languages of the world. Though this is essentially a linguistic question, its answer has impact far beyond the field of linguistics, because conditional sentences as linguistic phenomenon provide concrete, empirical access to the abstract problems the meaning of conditionals is related to.

In linguistics it is widely accepted that the relation between the form of a sentence and its meaning follows the principle of compositionality: the meaning of a sentence is determined by the meaning of its parts and the way they are combined. Applied to conditionals the principle of compositionality faces a number of very interesting challenges, concerning the interpretation of tense, aspect and modality. In recent years we can observe a growing interest in these challenges. Nearly all attempts to answer them made so far build on an extremely popular interpretation principle for conditionals known as the modal approach. But the modal approach postulates a general mismatch between the form of conditionals (*what you see*) and their meaning (*what you get*). This obviously poses a serious problem for compositionality and leads to various descriptive problems. It thereby hinders the very active research in the field.

The **goal** of this project is to open new perspectives by developing an alternative to the modal approach, i.e. by developing a general and formally precise compositional semantics of conditionals that makes descriptively correct predictions. The driving **methodological idea** behind the project is to restore a direct form-meaning correspondence for the semantics of conditionals: *what you see is what you get!* Our **guiding hypothesis** is that, contra to what the modal approach proposes, conditionals are surprisingly plain constructions: the *if*-clause introduces a hypothetical situation; the *then*-clause makes an ordinary statement about this situation. This suggests to treat *if*-clauses as nominal descriptions (*a book, the king of France*), one of the best-studied subjects in formal semantics.

In order to establish this very intuitive approach the project will build on the work experience the applicant already has with the semantics of conditionals and combine insights the meaning of conditionals *in abstracto* with a serious consideration of the form of conditionals in different languages. The project splits up in three subsequent phases. In a **first phase** the grammar of conditional constructions in a variety of languages will be studied. In a **second phase** a general and formally precise compositional semantics for conditionals will be developed. In a **third phase** the new approach will be tested via application to well-known puzzles concerning the interpretation of tense and aspect in conditionals.

The successful project will have substantial impact on the research community. Firstly, by replacing the modal approach it will provide linguists with much better means to tackle the particular problems concerning conditional sentence that they are interested in. Secondly, the study of the semantics of nominal descriptions has inspired among the most important breakthroughs in formal semantics. The application of these tools to conditional sentences might inspire further important technical developments. Finally, a powerful theory about the linguistic side of conditionals will provide means to evaluate theories about the meaning of conditionals as developed beyond the borders of linguistics.