



# Ambiguity as (Information) Gaps: Processes of Creation and Resolution

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International Workshop at the RTG 1808: Ambiguity

How do the processes of resolving and producing ambiguity work? Starting from the hypothesis that understanding an utterance involves a mapping to an internal representation, let ambiguity denote the presence of two or more competing mappings. We want to approach the phenomena underlying the cognitive processing of ambiguity.

As a first approximation, let us say that ambiguity arises when "gaps" are present in an utterance within natural language discourse that can be filled in two or more specific ways by the hearer. Consider encountering the following phrase in a videogame: "hit the treasure chest with a stick and it will break!". To some, "it" might be ambiguous, others might say that the stick will break (the chest probably won't). Substituting "open" for "break" removes that ambiguity because "open" is much more likely for a chest. In understanding the phrase, a lot of context has to be integrated nonetheless. Consider the response "I will use a rock then!". It is perfectly understandable but again lots of details are left out because they don't seem necessary. In natural language, hearers and speakers use additional information to fill in such "information gaps" or create them with great ease. Indeed, we often don't even take note of all the ambiguities that are technically there or that we introduce, while a computer might find ambiguities everywhere and create them in the wrong places.

Our working hypothesis is thus the following: speakers and hearers map utterances to some internal representation in which at least some of the information gaps are filled. This leads to a more specific set of interesting questions.

- What information is employed when hearers fill these information gaps?
- When, why and how do speakers create them?
- What counts as an information gap?
- What are the underlying cognitive processes in creation and resolution of information gaps?
- Which types of gaps are challenging to speakers / hearers / computers?

The questions still cover a broad range of specific research questions and make interdisciplinary exchange necessary. We want to illuminate these questions from different perspectives and see what different disciplines contribute (as of now). Be it by theoretical work, empirical findings or modelling.

An incomplete list of fields that might add to this could be as follows: Cognitive Modelling, Cognitive Science, (Psycho-, Computational) Linguistics, Neuroscience, Psychology, Philosophy (of Mind), Literary Studies. We invite submissions that add to the understanding of the basic question: What can we say about how speakers and hearers create, fill and recognise such information gaps cognitively?

Submissions should be in the form of extended abstracts of up to 500 words plus references. Abstracts can be submitted through [easychair.org/conferences/?conf=ambigap2018](https://easychair.org/conferences/?conf=ambigap2018). The workshop will be held in English.

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