This thesis builds on the observation that in certain circumstances, speakers of human languages refuse to judge some sentences “True” or “False”. This observation challenges semantic approaches modeling the interpretative process responsible for these truth-value judgments in a purely bivalent framework: these approaches model the sentences of human languages as propositions which are either true or false.

My work focuses on two types of sentences that trigger these non-bivalent truth-value judgments (that is to say, judgments different both from “True” and from “False”): vague sentences like (1) and presuppositional sentences like (2).

1. John is old.
2. John has stopped smoking.

A speaker who considers John between clearly old individuals and clearly not old individuals will hesitate to judge (1) “True” as well as “False”, for either judgment would imply that John is clearly old or not old. Predicates like old, which order their arguments along a scale and which yield non-bivalent truth-value judgments when applied to arguments in the middle of the scale, and the sentences formed with these predicates are called vague; the mentioned arguments are called borderline cases. In the described context, John is called a borderline case for the vague predicate old.

In a similar way, a speaker who believes that John has never smoked will refuse to judge (2) “True” and will hesitate to judge it “False”, for either judgment seem to imply that John used to smoke. Predicates like stop smoking, which seem to firmly imply a proposition (that is to say whether they are affirmed, denied or even questioned about an argument) and the sentences formed with these predicates are called presuppositional; the implied proposition is referred to as a presupposition associated with the predicate (or with the sentence). The proposition expressing that John used to smoke is a presupposition associated with (2).

In the literature, both the non-bivalent aspect associated with vague sentences and the non-bivalent aspect associated with presuppositional sentences have been modeled using logical systems that define a third truth value in addition to the truth-value standing for the true and the truth-value standing for the false. Two systems have been put forward: the Strong Kleene logic and supervaluationsism. Each system has been applied to vagueness as well as to presupposition, but no author seems to have used either system to jointly model both phenomena. Yet a system integrating vagueness as well as presupposition seems desirable, to the extent that each speaker's linguistic system deals with both types of sentences, and it even seems necessary when it comes to model hybrid sentences like (3) and (4) which contain both vague and presuppositional expressions.

3. John is old vague and he has stopped smoking presuppositional
4. I realized presuppositional that John is old vague

My thesis investigates two possible ways of extending these three-valued systems. In a first time I propose a system with five totally ordered truth values, which derives non-bivalent truth-value judgments that are specific to vague sentences on the one hand and to presuppositional sentences on the other hand. In a second time I propose a system with four partially ordered truth values, which also derives non-bivalent truth-value judgments specific to vagueness on the one hand and to
presupposition on the other hand. But contrary to the former system, the latter derives the same truth-value judgments for both affirmative and negative counterparts of presuppositional sentences when evaluated in contexts where the presuppositions are not satisfied. Each of the two systems is designed to account for hybrid sentences like (3), which conjoin a vague sentence with a presuppositional sentence. In the five values framework, I also present a possible way of integrating hybrid sentences like (4) where both types of expressions contribute to form a single matrix sentence.

This thesis also has an experimental aspect. It features two studies: the first one investigates the truth-value judgments triggered by affirmative and negative counterparts of vague descriptions of borderline cases and of sentences whose presuppositions are recognized to be false; the second one, conducted in collaboration with Paul Égré, investigates the acceptance of two types of contradictory descriptions of borderline cases, built with vague adjectives and their polar antonyms (like the sentences “John is tall and short” and “John is neither tall nor short”) or built with vague adjectives and their syntactic negation (like the sentences “John is tall and not tall” and “John is neither tall nor not tall”).

The first study consists in two main experiments and one subsidiary experiment. The results of these experiments seem to suggest that on the one hand vague and presuppositional sentences trigger non-bivalent truth-value judgments in specific contexts and that on the other hand polarity (whether sentences are affirmative or negative) has no influence on these truth-value judgments. Based on the results of these experiment, partly designed to test the predictions of the system with five totally ordered truth values, I decided to propose the system with four partially ordered truth values, which better fit the observations.

The second study consists in a pilot and a main experiments. These two experiments show that the and-descriptions are globally less acceptable than the neither-descriptions. They also show that this difference is maximal when the descriptions involve polar antonyms, and minimal when they involve syntactic antonyms: participants no longer systematically reject the and-descriptions and no longer systematically accept the neither-descriptions in the latter configuration. We claim that these results argue in favor of the position according to which sentence (4), when evaluated in a context where John is a borderline case, trigger truth-value judgments such as “Neither true nor false” as well as truth-value judgments such as “Both true and false”. Moreover, we show how these results argue for a specific approach of antonyms that was proposed in the literature, but against a competing approach also proposed in the literature.