# Reply to Lluís Godo's Comments on
## *Handling Borderline Cases Using Degrees: An Information Processing Perspective*

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We thank Lluís Godo for his accurate summary of our contribution and for his additional comments. In the following, we briefly come back to some of these comments.

Indeed, our paper considers different situations in knowledge representation where borderline cases exist. Borderline cases may be simply distinguished from cases considered as central or normal.[1] But, it is often beneficial to use degrees (which belong to a scale that may be only ordinal) for handling them. For instance, a penguin is a less typical representative of the concept of bird than a sparrow. However as noticed in the comments, a penguin is a quite typical Antarctic bird, and thus typicality is context-dependent. This should not be surprising. Since 'bird' and 'Antarctic bird' are different concepts, they may have different typicality ordering. Here we also have a non-monotonic reasoning situation, since one of the concepts is a subconcept of the other. This dependency of the typicality ordering on the context might also be put in parallel with the fact that fuzzy set representations of gradual properties depend on the context as well: a 'large butterfly' is certainly smaller than a 'large elephant'. Still in such a case, the word 'large' has a different meaning depending on the context, while in the previous example, it is not the representation of 'bird' that differs, it is the concept 'bird' itself which is replaced by a more specific one, strictly speaking.

The last part of our paper deals with what may be regarded as a vague, or at least flexible, understanding of non-vague terms, interpreting, e.g., 'married' as 'married (in a strict juridical sense)', but also possibly as 'married or living in a marital way', which may be useful for solving apparent inconsistency between reports. Interestingly enough, in such a case the person who receives the information 'married' is faced with a situation of uncertainty in meaning,[2] while it is rather a matter of preference for the person who labels a situation with a word (or an expression) rather than with another one; moreover, the words or expressions between which one hesitates have somewhat similar meanings. This illustrates the fact that in practice, uncertainty, or preferences, may be related to similarity, although these three notions should be distinguished and can be associated with degrees which should not be handled in the same way in general.

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[1] Such an idea was first proposed by Y. Gentilhomme in "Les ensembles flous en linguistique. Cahiers de Linguistique Théorique et Appliquée (Bucarest), 5, 47–63, 1968".

[2] See, e.g., Schefe, P. On foundations of reasoning with uncertain facts and vague concepts. Int. J. of Man-Machine Studies, 12, 35–62, 1980.