Preface

These Proceedings present a selection of papers from the later-delayed 12th Conference on Modeling and Using Context (context21.cloud) and follow other Proceedings of similar Workshops on Context (http://ceur-ws.org/Vol-594/, http://ceur-ws.org/Vol-1845/), the last of which was organized inside the framework of the 10th Conference on Modeling and Using Context (LNAI 10257).¹

Context is a multifarious concept used in many disciplines. In the last two decades, the Conferences on Modeling and Using Context² attempted a multidisciplinary approach to understand the role of the different concepts of context in Artificial Intelligence, Computer Science, Philosophy, Linguistics and Psychology. Due to the specialization of the subsectors of each discipline, interdisciplinary work is becoming increasingly more difficult. However, attempts of this kind are worth pursuing to keep monitoring the developments in not-too-distant disciplines, including the philosophical, logical and linguistic research in natural language processing.

The 15 papers included in this workshop are a selection from 26 papers. They have been selected, besides their internal quality, also because of their interconnections and strict links with the logical and methodological aspects of the notion of context. Most of them concern problems at the boundary of semantics and pragmatics, promoting suggestions on the shift from the semantic web to the pragmatic web, a frontier still to be properly studied. Approaches based on the traditional suggestions about pragmatic web concern the social aspects of interaction that are centered on the notion of context, besides semantic aspects of meaning and information.³ On the other hand, the ideas emerging from the debate on the boundaries between semantics and pragmatics⁴ may give rise to more formal approaches. One may call the first kind “social-pragmatic web” and the second “linguistic-pragmatic web”. The latter trend suggests that the formal semantic approach in natural language processing can be extended to aspects traditionally not considered, and in particular aspects dealing with the uses of demonstratives, presupposition triggers, implicatures, metaphors, irony, generics and other linguistic features that are studied in linguistic pragmatics and discussed in the present volume.⁵

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¹ See Brezillon, Penco, Turner (2017).
² See the conferences listed at the site of Context (2019).
³ Weigand, Paschke (2012). See also Vidotti et al. (2019).
⁴ See, for instance, Domaneschi, Penco (2013).
⁵ Pragmatics is still a field of research with vague boundaries, although linguistic pragmatics can be defined, more easily at least, as a set of problems and procedures, such as the treatment of
When dealing with linguistic pragmatics, context becomes a necessary ingredient for any formal treatment. However, the concept of context itself may give rise to different kinds of formalizations or approaches. Shall we follow David Kaplan and use a notion of “context of utterance”, given by the parameters of time, location and speaker, or shall we prefer to follow Robert Stalnaker and use a notion of “cognitive context”, dealing with the set of presuppositions connected with the situation in which something happens? Different viewpoints are presented in this workshop, using different concepts of context. The most “semantical” ones tend to restrict the concept to a minimum role, while the ones more linked to pragmatics give context a wider role in the analysis of linguistic interaction.

The first session of the workshop (Experimental Results) is devoted to studies that can be included in the context of experimental pragmatics, a fundamental trend posing restrictions on, or corroborating, available theories and explanations. It also touches upon background problems of the Theory of Mind (ToM), which is now fundamental in humanoid robotics. Aldair Diaz-Gómez proposes an experiment that corroborates a processing account for scalar implicatures (SI) that makes use of the Strawsonian presupposition of existence, thus complying with the principles of a grammatical, as opposed to pragmatic, theory of SI. Dominik Dziedzic’s experiment tests the predictions of a two-dimensional approach to demonstratives, in a use-conditional framework. His results account for the heterogeneity in demonstrative reference and undermine the idea that linguistic conventions suffice for the specification of the factor determining reference. Eleonora Marocchini and Filippo Domaneschi challenge the view that some pragmatic phenomena such as indirect requests should be explained by a ToM. They present an experiment showing that, in the case of conventionalized indirect requests, a lexically-based comprehension process does the real explanatory work. A fourth experimental study, conducted by Zsuzsanna Schnell, Eszter Varga, and Róbert Járai, aims at understanding how context awareness facilitates non-compositional meaning construction at an early age. Working on linguistic utterances like metaphor, humor, and irony-understanding, the research tests different aspects of pragmatic competence and the presence of a ToM in young children, confirming some recent studies.

The second session (Semantics/Pragmatics Boundaries) presents some topics that emerged to the fore following the development of social networks: the topic of pejoratives and the topic of one’s responsibility for what one says. Both topics have been treated from a semantic and a pragmatic viewpoint. Dealing with the first topic, Victor Carranza approaches a background problem that gives a lot of worries to computer scientists working on “emotive robotics”, that is the difference between standard lexicon and emotional lexicon, defending a descriptive account of all-purpose pejoratives in a way that can be extended to other pejoratives, thus strengthening a suggestion due to David Kaplan. Palle Leth works on the distinction between the phenomena of lying and misleading. Against the idea of a sharp division between the two, this paper proposes a very unconventional stance, concluding that there are no conceptual, empirical or moral reasons supporting the distinction.

indirect speech, presuppositions, implicatures, metaphors, speech acts. For a presentation of the variety of topics in pragmatics, see Barron, Gü, Steen (2017).

Following these two application cases, the two other papers of the section develop a more general theoretical discussion, which aims at a better characterization of contextualism based on its relations with other trends. Eduardo Pérez-Navarro challenges Stojanovic’s idea that relativism and contextualism are nothing but notational variants, arguing that the latter cannot be made as flexible as the former. Ernesto Perini Santos opposes the minimalist thesis that pragmatic inferences happen after a proposition is grasped, but he does so by following a new contextualist direction, one that puts Cavell’s and Predelli’s ideas about the semantics-pragmatics divide in the same neighbourhood.

The third session (on Context in Natural Language Processing) deals with particularly difficult topics concerning the formal and computational treatment of natural language. Tadeusz Ciecierski and Paweł Grabarczyk make a proposal for adding context to the new Directival Theory of Meaning (nDTM). Like the original directival theory presented by Ajdukiewicz, also nDTM assumes that for every simple expression in language there is a set of directives that contain that expression. By adding the parameter of contextual distribution to the notion of meaning-directive, the authors allow their theory to operate also on utterances (not only sentences, as per nDTM), thus solving the problem of the meaning of indexicals and demonstratives in nDTM (partially, at least). Eugenia Kulakova and Stefan Rinner question Lewis’ appeal to two conditional operators to explain the cognitive difference in the processing of indicative and subjunctive conditionals as a logical difference. Rather, they argue, the two kinds of conditionals are processed in divergent ways due to the different kinds of focus that they determine (‘narrow’ in the case of indicative conditionals, ‘broad’ in the case of subjunctive ones). Salvatore Pistoia-Reda and Luca San Mauro make a more general point: language is normally conceived as including an algorithmic deductive system able to exclude (unacceptable) trivialities. Which kind of system is a question of debate, but typically it is intended as based on a nonstandard or non-classical logic. Having shown that a recent version of this response (based on relevance logic) overgenerates ungrammaticality predictions, the authors conclude that more plausible accounts combine classical logic (FOL) with contextually-modulated logical forms. Maciej Tarnowski’s indexical treatment of proper names, based on the hybrid approach on indexical expressions developed by Wolfgang Künne and Stefano Predelli (among others), promises to counter many of the problems affecting existing indexical accounts of proper names.

The fourth session (Epistemic and Cognitive Aspects of Context) begins with a paper by Yves Bouchard, who holds that, in a coarse-grained theory of knowledge, logical inferences can be ambiguous and knowledge itself turns out to be a multifaceted notion. He then proposes to understand the different types of knowledge in function of different epistemic contexts (in line with epistemological contextualism). Mark Bowker discusses the cognitive aspects at play when dealing with generics, a kind of syntactic structure which requires pragmatic interpretation and context to be properly treated. The paper insists on contextual dependence, challenging other perspectives, and introduces a new notion of “context sensitivity” that must enrich the treatment of natural language expressions (often treated only inside the framework of “linguistic sensitivity”). Finally, Inés Crespo, Andreas Heise and Claudia Picazo Jaque present a work on one of the most classical topics in linguistic pragmatics: the metaphorical use of natural language. Although they criticize a proposal by Asher and Lascarides, they
extend their idea of “coherence”. However, coherence cannot be only syntactic, but it must also include a cognitive component. The conclusion is that only a fine notion of context, including different levels of contextual clues, may help understanding how the same linguistic expression may have different cognitive imports and be understood sometimes literally and sometimes metaphorically.

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