

Tackling Climate Change: Unfinished Business from the Last “Winter”

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Abstract

In the 1990s, as the World Wide Web became not only world wide but also dense and ubiquitous, workers in the artificial intelligence community were drawn to the possibility that the Web could provide the foundation for a new kind of AI. Having survived the AI Winter of the 1980s, the opportunities that they saw in the largest, most interconnected computing platform imaginable were obviously compelling. With the subsequent success of the Semantic Web, however, our community seems to have stopped talking about many of the issues that researchers believe led to the AI Winter in the first place: the cognitive challenges in debugging and maintaining complex systems, the drift in the meanings ascribed to symbols, the situated nature of knowledge, the fundamental difficulty of creating robust models. These challenges are still with us; we cannot wish them away with appeals to the open-world assumption or to the law of large numbers. Embracing these challenges will allow us to expand the scope of our science and our practice, and will help to bring us closer to the ultimate vision of the Semantic Web.