

Argumentation for Consumers of Health Care

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■ The Argumentation for Consumers of Health Care AAAI symposium was held at Stanford University, Stanford California from March 27–29, 2006. The goal of this symposium was to investigate the role of argumentation in future intelligent health-care systems, especially focusing on systems designed to interact directly with health-care consumers.

Different notions of argument historically have played a central role in artificial intelligence to model the diagnostic reasoning and decision making of medical experts. However, it was beyond the scope of that research to address information needs of the layperson. It was assumed that a medical expert, trained to interpret explanations produced by a system, would mediate between system and layperson. The goal of this symposium was to investigate the role of argumentation in future intelligent health-care systems, especially focusing on systems designed to interact directly with health-care consumers.

The symposium brought together researchers from a variety of subfields of AI such as decision support, multiagent systems, computational models of natural argument, embodied conversational agents, and natural language text generation, in addition to researchers in fields providing empirical or theoretical foundations (including health communication, argumentation, social psychology, cognitive psychology, psycholinguistics, and human factors). One major theme of

papers presented at the symposium was health behavior change support systems, interactive systems designed to encourage users in activities such as healthy eating and exercise. (These papers continued a major theme of the AAAI 2004 fall symposium on health dialog systems.) The symposium also included two invited talks on this theme. A talk given by Stacy Marsella (University of Southern California / Information Sciences Institute) focused on the use of behavioral theory and emotion modeling in design of pedagogical dialogue systems. A talk given by B. J. Fogg (Stanford University) outlined general principles of persuasion in human-computer interaction.

Another major theme was normative argument in health care, from decision-support systems for medical experts to systems generating patient-tailored explanations designed for the health-care consumer. The papers on this theme described systems using a variety of models of argument (such as from argument theorists such as Stephen Toulmin and Douglas Walton). Several papers provided analyses of argument patterns found in actual medical discourse. Although the use of argument in such systems has a different purpose than in health behavior change systems, the symposium participants discussed the potential need to consider a patient's emotional state in presenting normative arguments to patients. The third theme of the symposium was linguistic and cognitive factors in effective communication of medical informa-

tion. These papers served to remind the participants that the language, layout, and graphics in which an argument is conveyed can affect the audience's comprehension of the argument and that presentation factors can even be manipulated to prevent an audience from accurately assessing negative information.

The symposium participants discussed how interest in argumentation is growing but is still fragmented among many fields and how the symposium was useful in bringing together many different perspectives of argument. However, the participants shared the goal of developing methods to improve health outcomes and agreed that they would like to attend future symposia with the same focus as this one.

Timothy Bickmore and Nancy Green served as cochairs of this symposium. The papers of the symposium were published as AAAI Press Technical Report SS-06-01.

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