

Defeasible Reasoning and its Moderators in Everyday Situations

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In defeasible reasoning previously drawn conclusions can be withdrawn in light of new evidence. For instance, if one gets the conditional “If a person eats lots of candies, then the person will get cavities” and the fact that someone – e.g. Anna – did eat lots of candies, one should conclude logically that Anna will get cavities. However, in light of additional information, such as Anna brushing her teeth or visiting the dentist regularly, reasoners often withdraw previously valid conclusions. In our work we investigated several moderators for defeasible reasoning in everyday situations, such as 1) the phrasing of the conditional rule (“All persons that eat candies...” vs “Some persons that eat candies”), 2) The specificity of the agent in the conditional rule (“If a person eats...” vs. “If the psychology student Ben eats...”), 3) the kind of inference (Modus Ponens vs. Modus Tollens), and 4) the personal relevance of the conditional (i.e. the personal or emotional impact of the relation described). All in all, the results highlight the importance of prior knowledge, linguistic factors, emotions, and personal relevance in defeasible reasoning.