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TITLE: On interdependence between belief updates and reliability structures: an approach from two-dimensional hybrid logic

We, social agents, update our beliefs with new information based on our reliability structures. When an agent receives a piece of information from a reliable sender, it is likely that she changes her belief. If the information is from an unreliable sender, she might discard the information. Conversely, our reliability structures might be affected by the information that agents provide. An agent might downgrade the sender in her reliability structure when she receives an unreliable information from the sender. This talk aims to model this interdependence between belief updates and reliability structures. I employ Lewis'(1973) system of spheres to model beliefs as plausibility structure between worlds and reliability structures as relations between agents. In order to capture the interdependence between the two structures within a single framework, I use Sano's (2009) technique of (dependent) product of hybrid logics and propose two dynamic operators, one for plausibility structures and the other for reliability structures.