

On Personal and Role Mental Attitudes: A Preliminary Dependence-Based Analysis

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Abstract. In this paper, we present some preliminary results concerning the extension of dependence theory [2] and social reasoning [9] to cope with the notion of *organizational roles*. In order to accomplish this task, we first present a rather informal definition of organization and roles, showing how this additional dimension can be represented within a 3-layered architecture of mental states. We then restrict our analysis to the domain level, by extending our original notions of unilateral and bilateral dependence, as well as that of goal situation, to show that just by representing explicitly the input source of some mental attitudes one can easily explain some interesting social phenomena, like agents' adequacy to roles and vice-versa. For methodological reasons, we divide this analysis along two main axes, i.e., the inter-agent and the intra-agent dimensions.

1 Organizations, Roles and Autonomy

The task of proposing a complete, formal and rather universal representation of *organizations* and their associated roles is a very difficult one. Indeed, several different dimensions are used by researchers in social sciences [3, 5], distributed AI and multi-agent systems [4, 7], and distributed computing [1, 6] to characterize what an organization is and what its main components are. In a certain sense, quite all of these proposed descriptions comprise both a *factual* and a *procedural* dimension.

By factual we mean a mere observable behavior, despite its internal functioning: an organization has its high level goals, its observable inputs and outputs.

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