Of Social Norms and Sanctioning: A Game Theoretical Overview

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ABSTRACT

“Social norms” is a term widely used in different areas of research like sociology, philosophy or multiagent systems. However, there is still not a clear definition of what social norms are and the types of problems they solve. This work presents a general classification and distinction of norms from a game theoretical perspective. The types of norms treated in this work are those norms created through the interaction of agents and that are not imposed by any central authority. The main differentiation is made between conventional norms and essential norms. The former are norms created to establish a convention in a situation where several solutions are equally feasible, but the society must decide on one, e.g., driving on one side of the road; the later norms solve problems of collective action. Finally, we analyze several aspects of sanctioning mechanisms and how these mechanisms affect in the emergence of norms.

Keywords: Agent, Conventions, Game Theory, Sanctions, Social Norms

INTRODUCTION

Descriptions of tasks like greeting another person, dressing, driving, etc. are often accompanied by the phrase “in a proper way”. The “proper way” to fulfil these interaction protocols is specified by social norms. A number of tasks that require some kind of interaction with other agents might require agents to follow specified guidelines to successfully complete these tasks. Social norms can facilitate such agent interactions and enable agents to complete these tasks efficiently. Such social norms can emerge and spread among the society until they are widely accepted and adopted. Therefore, we can view social norms as key elements that enable coordination and self-organization in our everyday life.

Not all the social norms, however, deal with the same kind of interaction scenarios. We observe that social norms like greeting (shaking hands, kissing, leaning towards each other, or a simple “hi!”) pertain to different situations compared to, for example, the social norm of recycling. We also observe that social norms, though referring to the same concept, are defined...
using different terms in the literature, e.g. norms, social laws, conventions, social norms. In addition to the different types of norms, and the wide variety of terms used to define this social instrument, the study of social norms is made more challenging by the heterogeneous perspective on this issue and how it is viewed in diverse research areas such as economics, social sciences or multiagent systems. We believe that though these areas have interesting theories and practices to contribute to social norms literature and can benefit from prudent adaptions and applications of social norms, not enough attention and effort has been expended on this potentially effective social coordination mechanism by the corresponding research groups.

The primary goal of this article is to capture the different definitions and points of view of social norms from the related research areas and adapt them to a multiagent perspective. We also develop a characterization of social norms into two primary groups: coordination norms and essential norms. This division is also analyzed from a game-theoretical point of view with the goal of understanding the process of norm emergence. Finally, an analysis of the relation between social norms and sanctions is presented.

### NORMATIVE VOCABULARY

Before proceeding further we need to define some terms that are related to norms and that we consider to be the basic vocabulary for a common understanding of the three main branches of research (sociology, economy and multiagent systems). The interactionist norms that we are analyzing in this work are created, oriented, controlled and imposed by agents. Following Coleman (1998) agents are grouped by their role in the norm. There are two basic roles: the beneficiaries and the targets. Targets are the actors for whom the norm is specified for. Beneficiaries are those actors who benefit from the norm, potentially hold the norm and are potential sanctioners of the target actors. In the same example from Coleman, in the norm “Children should be seen and not heard”, the target are childrens and the beneficiaries are adults around those children looking for some peaceful environment.

Another characteristic of norms describes how the norms affect the actors. The norms where the set of target and beneficiaries are completely disjoint are defined by Coleman as Disjoint norms. However, the set of target actors and beneficiaries might not necessarily be disjoint for a norm.

Coleman defines the norms where each actor is simultaneously beneficiary and target of the norm as Conjoint norms. However these distinction are the extremes. Coleman presents different intermediate cases with different types of inclusions of both sets of targets and beneficiaries shown in Figure 1. Coleman (1998) also claims that norms are directed at certain focal actions. The term focal

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**Figure 1. Coleman’s inclusion relation of beneficiaries and targets of a norm for different types of norms**

![Diagram of Coleman's inclusion relation of beneficiaries and targets of a norm for different types of norms](image-url)
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