No Smoking Here: Compliance differences between legal and social norms

(Extended Abstract)

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1. MOTIVATION

The values shared within a society influence the (social) behaviour of the agents in that society. In this paper we focus on the effect of norms on behaviour, taking into account the different *types* of norms: implicit norms that emerge among the people, norms that are explicitly imposed on the community (by a governing body) on the other, and norms that agents develop privately over their lives (by being part of different communities and having certain experiences). This last type can be seen as a sort of default behaviour of an agent. We will refer to these three types as social, legal and private norms respectively.

In particular, we study the difference in conforming to social conventions versus complying with explicitly given laws (with penalties). This is partly motivated from an interest in the design of new governance models for socio-technological systems, which aim to include elements of self-regulation.

The work in this paper extends current work on multi-agent models for norm compliance, e.g. [1, 2]. We validate our model using the framework of Hofstede on national cultures [3].

2. NORM TYPES

For the three norm types we distinguish, different considerations will play a role in the agent's decision to behave according to the norm or not. We characterize an agent by his primary preference which norm type he considers guiding for his behaviour: 1) *lawful* agents: law-abiding, whatever the law prescribes, they do; 2) *social* agents: whatever most of the agents in a certain shared context prefer, they do as well; 3) *private* agents: irrespective of law or context, they do what they themselves judge to be right.

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3. EXAMPLE CASE AND SIMULATION

We developed a simple simulation to illustrate how different preferences over the three norm types may result in different behaviour changes after the introduction of the anti-smoking laws. Agents in this scenario have a private attitude towards smoking and a preference order on the three types of norms (legal, social and private) discussed in the previous section. For the sake of this simulation, we simplified this into each agent having one preferred norm type (i.e. the top element in his preference order on the norm types).

The legal norms range over the entire society, the social norms are relative to the contingent context of those people present in the cafe. This gives the simulation its particular dynamics.

Figure 1 shows the results of the simulation for different population compositions. In this scenario, agents have a fixed private preference towards smoking (assigned randomly with 50% chance) and a fixed norm type preference (i.e. they will either follow legal, social or private norms).

As can be expected, highly normative societies (where the percentage of lawful agents is above 50%) react positively to the introduction of the smoking ban. This can be explained by the fact that non-smokers will be more inclined to go to the cafe, as they can be sure that the place will be smoke free. In configurations where social agents are in the majority, the number of clients typically diminishes after the introduction of the law. Non-smokers and lawful agents will not stay in the cafe as none of those feels comfortable either because of the smoke or because the law is not being uphold.

4. MODEL: NORM TYPE ORDERS

With norms functioning as links between values and actions, preferences reflecting values can explain why –in particular in case of norm conflict– a certain action is chosen by an agent rather than another. In our model, we take the norm types to represent agents' values concerning following rules of conduct: compliance, conformity, consistency.

The six orders of the norm types can be taken to define a part of the agent's "personality". Here we give some ten-

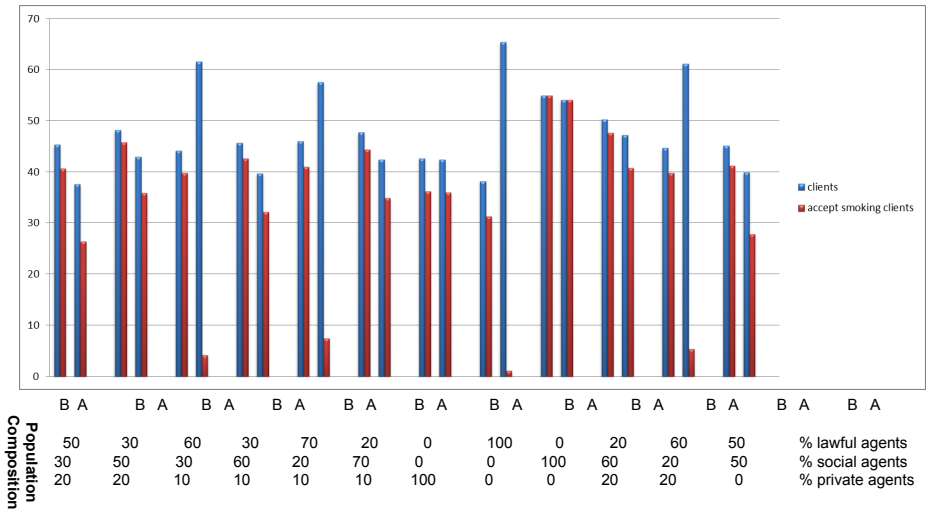

Figure 1: Results of the simulation for different compositions of the population

tative characterisations of the six agent types corresponding to the six norm type orders. The structure of the orders gives us some oppositions:

- L $\succ$ S $\succ$ P: *authoritarian*
- L $\succ$ P $\succ$ S: *absolutist*
- S $\succ$ L $\succ$ P: *collectivist*
- S $\succ$ P $\succ$ L: *relativist* (opposite of absolutist)
- P $\succ$ L $\succ$ S: *individualist* (opposite of collectivist)
- P $\succ$ S $\succ$ L: *anarchist* (opposite of authoritarian)

This characterisation of the norm type orders gives us three character dimensions that are not necessarily orthogonal: absolute–relative, authoritarian–anarchist, collectivist–individualist.

Each society is composed of agents with different norm type preferences. The ratio in which each of the agent types is present in a society, reflects its culture with respect to rules of conduct. For example, the highly individualist non-hierarchical character of a society is reflected by it having a large portion of agents of the last type (P $\succ$ S $\succ$ L). The model in terms of norm types can in that way be used to represent different cultures in their response to the introduction of new (types of) regulation. A very well-known characterisation of cultures is the one of Hofstede [3].

A link between cultural dimensions to our norm type orders, would provide a translation from the (known) Hofstede cultural characterisation of societies with their norm type preference profile, and could validate our model. We attempt to link our simulation results with the reality of the smoking prohibitions in Ireland and the Netherlands.

Unfortunately, the effect of the introduction of the smoking laws these two countries does not give a clear picture because the Irish law differs from the Dutch one, in that it prescribes a complete ban of smoking, while the Dutch law allows cafes to install separate, unserviced, smoking areas.

5. APPLICATION TO VALUE SENSITIVE DESIGN

Our work contributes to Value Sensitive Design [4] as it enables to link design choices to value and norm preferences. According to VSD the process of implementing a (institutional and/or technologic) system should be guided by social values which not only must be made explicit but also must be systematically linked to design choices. The degree of acceptance of a certain policy is influenced by the cultural background of the groups affected by that policy. The analyses the norm preference model of that group guides the choices on policy implementation. E.g. a society where social norms are preferred will more likely react positively to a policy that is introduced by word of mouth in social networks, whereas a society that prefers legal norms will react better to an implementation of the policy by legislation means.

6. CONCLUDING REMARKS

We see this research as a contribution to the research programme of Value Sensitive Design, as it aims to be a way of making the connections between values and design more explicit, more formal, and more manageable. Taking into account the preference profile of a community with respect to norm types, and thereby aligning with the values of that community, should help to design more effective policies.

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