

# **A naturalistic perspective on emerging social norms**

## **A case study of the demand for cleanliness**

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*Very preliminary version, please do not quote without the author's permission. Thank you.*

The substantial increase in residential electricity demand over the last century challenges public policies aiming at energy conservation. Many researchers nowadays agree that current levels of consumption are unsustainable and that a reduction in 'standards' is inevitable. We argue that in this context, attention should be devoted to the 'naturalistic' basis of consumer practices. By this we mean the basic human wants involved in household activities, as well as modes of consumer learning. Using the case of clothes washing as an example, we show how consumption externalities and knowledge progress interact with the emergence of social norms. We argue that the cleanliness norm emerged in the 19th century for a fundamental reason: it helped to solve the problem of the spread of infectious diseases (consumption externality), which figured prominently in times when social networks radically changed during urbanization and industrialization. The social significance of cleanliness is thus not arbitrary. Placing the naturalistic underpinnings of consumer behavior on the agenda complements the constructivist view on cleanliness and helps to inform policy-making heading for a change in standards.

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# 1 Introduction

Many researchers in the field of sustainable consumption have arrived at the conclusion that improvements in the materials intensity of production (Weizsäcker et al, 1977) and the technical efficiency of devices are bounded and will have to be complemented by ‘voluntarily curtailment’ on part of the consumers (Keirstead, 2006). How the reduction in standards, for instance with regard to energy use, will be achieved remains yet an issue unresolved. Competing branches favor to focus either on ‘value change’ (Michealis, 2000) via information provision or ecological taxing (Binswanger, 2001). The even more fundamental questions in this context are: Which standard of consumption can be justified, and on which grounds? Is it sufficient to link current modes of consumption only to current consumer motives?

In fact, many consumption activities nowadays entail a strong relation to social motives such as status seeking or conformity. The related consumption activities have been labelled ‘positional treadmills’, suggesting that ‘status races’ show little connection to true consumer wants (Hirsch, 1976; Frank, 1999). Instead, they represent arbitrary processes of social comparison, leading to spirals of spending, for which no upper limit exists and which do not enhance consumer welfare in the long run (Binswanger, 2006). Moreover, status seeking externalities might correlate with externalities in the form of resource depletion and environmental pollution (Ng and Wang, 1993; Howarth, 1996). Starting from the policy goal to decelerate resource depletion, one might ask the following questions: Is it really true that socially linked consumer spending represents arbitrary patterns of behaviour which should be undermined? Taking a closer look at the literature on relative consumption (Duesenberry, 1949) and status externalities, we see that it neglects the question of which other basic wants are addressed by a specific consumption activity. However, the notion of hedonic treadmills might be misleading in cases, in which the consumption activity is not only related to social motives, but also addresses at least one other fundamental human want.

Much scholarly research in sociology and game theory has been devoted to the connection between externalities and social norms (Opp, 1983; Coleman, 1990; Bicchieri, 2006). Likewise, many ideas exist about how social norms affect consumer behaviour (Homans, 1974). This paper suggests to evaluate current, observable patterns of behaviour in light of the *former* consumption externalities which have been solved. More precisely, *we suggest to identify which externalities gave rise to the social norm (which now affects consumption patterns), and to check if those contingencies are still present to a certain extent* - meaning that a manipulation of the social norm (and consumption standards) might lead to unexpected deterioration in consumer welfare.

In this context, we reflect upon the general contingencies of consumption externalities in the first place. Drawing upon the ‘Learning to consume’ (LTC) approach (Witt, 2001), and the writings of Joel Mokyr (e.g. Mokyr, 1993) we can identify two elements: basic human wants (1) and changes in consumers’ beliefs, as a consequence of learning processes (2). In accordance with Witt, we call this “the naturalistic underpinnings” of

consumer behaviour. Both basic wants and consumer learning contribute to explain why a certain situation is conceived of as a “problem” (i.e. externality) whose solution is envisaged via the introduction of a social norm. As one contingency of externalities (and norms) we identify changes in social networks, urging inhabitants to find new modes of interacting (1). Furthermore, we conjecture that changes in beliefs matter: beliefs either with regard to the pure *existence* of the externality (2) or with regard to *causal relationships* between consumer behavior and externalities (3).

We illustrate our thoughts for the case study of the “demand for cleanliness” in the context of the activity of clothes washing. Because of the corresponding energy use, laundering represents a possible candidate for reflecting upon the change in levels of consumption. Sociological approaches claim that cleanliness represents a ‘social construct’ i.e. society defines when a consumer can be considered “clean” (Douglas, 1984; Collins, 2006). Moreover, a cleanliness norm nowadays seems to exist and to affect consumption patterns (SIFO, 2003). These insights depict the demand for cleanliness as a social phenomenon of some arbitrary kind, which could (easily) be changed on the basis of a social agreement. However, our research finds that the cleanliness norm only emerged in the 19<sup>th</sup> century and for a fundamental reason: namely, cleanliness was believed to solve the problem of the *spread* of infectious diseases (a consumption externality) which still figured prominently at that time of increasing urbanization. Knowledge progress and dissemination in terms of hygiene probably triggered norm emergence.

The remainder of the paper is structured as follows. In the next section, we review the basic definitions of and conjectures about externalities and norms, and we highlight the interrelations between these variables. In section three, the LTC approach will be presented in more detail together with the central hypotheses it delivers. More in detail, the LTC, in connection with other writings (for instance, Mokyr’s), can be considered as a starting point for deriving hypotheses, under which conditions consumption externalities arise and result in the emergence of a social norm. Afterwards we turn to the case study of the demand for cleanliness for purposes of illustration (section four). Section five concludes.

## **2 Consumption Externalities and Social Norms**

### **2.1 Consumption Externalities**

In this section, we introduce two terms of central importance to our argument, “consumption externalities” and “social norms”. A prominent example for consumption externalities is the use of environmental goods which are *public goods* (e.g. Hartwig, 1999). Public goods are characterized by the fact that individuals cannot be excluded from their consumption, although they might not have contributed to the “supply” of the good in the first place. The situation can be described as “what one person consumes, another cannot,” drawing attention especially to the phenomenon of resource depletion. For example, the electricity that one person utilizes is generated from resources which are no longer available for someone else. Thus, one individual’s consumption activities affect

the consumption opportunities and potentially the welfare of others. When these impacts on others' welfare are not accounted for in resource prices, the difference between 'social costs' and individual (private) costs is referred to as the 'external effect' or 'externality' (Pigou, 1920). (For a more detailed discussion, see Buchanan and Stubblebine, 1962).<sup>2</sup> If individuals fail to take account of these external effects in their consumption decisions, the consequence is over-consumption relative to the Pareto optimal allocation. This failure to reach a Pareto optimal allocation is sometimes referred to as "market failure."

Traditional economic solutions to this problem aim to achieve a full 'internalization' of (marginal) costs and benefits by appropriately *raising the price* of the externality-producing consumption activity, thus potentially reducing the consumption of the public good. One way to achieve this is the imposition of "optimal" taxes (Pigou, 1920) by a benevolent social planner. An alternative to this market intervention is the appropriate definition of property rights, such that an externality is traded and thereby obtains a market price (contractarian solution) (Coase, 1960).<sup>3</sup> In each case, the intended result is that consumers will face monetary incentives that correctly reflect the full social cost of their consumption activities.

Despite their theoretical appeal, these policy options may fail in many real world contexts. This can happen because a) the monetary assessment of the externality is false, b) the identification of the originator is not possible, c) property rights do not exist, d) there remain incentives for free riding and opportunistic behaviour, e) the group is too large causing transaction costs which exceed the welfare gains from internalization (e.g. Coase, 1960; Davis and Whinston, 1962; Buchanan, 1969; for an overview, see Hartwig, 1999).

In addition to the classical case of consumption externalities, there exist so-called *status (consumption) externalities* (see e.g. the applications of Ng and Wang, 1993; Akerlof, 1997; Liu and Turnovsky, 2005). Building on Veblen's concepts of 'conspicuous consumption' (Veblen, 1899) plus writings on 'relative consumption' (Duesenberry, 1949) the literature on status externalities discusses the psychological phenomenon that "what one person consumes, the other must consume as well." As discussed most prominently by Hirsch (1976) and Frank (1989), the desire to 'keep up with the Joneses' can lead to a situation in which consumers continually increase their levels of consumption in an effort to out-consume their neighbours. Status races induce processes of social comparison, sometimes of an arbitrary nature, leading to spirals of spending for which not necessarily an upper limit exists. This process has been labelled 'positional treadmills' (Hirsch, 1976; Frank, 1999), suggesting that status races do not result in an increase in happiness or welfare. For it represents a zero-sum game. In fact, some

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<sup>2</sup> Not only negative, but also positive externalities exist, for which the originator is not sufficiently compensated by the "recipient".

<sup>3</sup> The suggestion by Coase is derived from the insight that originator and addressee of the externality stand in a reciprocal relationship: both potentially affect each other in a negative or positive way, depending on the viewpoint. For example, a factory produces smoke which harms the products of the local laundry. However, this harm could only be done, because the two enterprises are located close to one another. Please note that the cited literature on externalities relates to production externalities and firms. However, the basic argumentation is usually applied to consumption externalities as well (see e.g. Hartwig, 1999).

empirical evidence, based on statistics of income growth, seems to point in that direction (Easterlin, 1974), although these findings raise scepticism elsewhere (Veenhoven and Hagerty, 2006). Still, many recent studies on welfare effects of status consumption seem to take the Easterlin-findings at face value (e.g. Binswanger, 2006).

As Ng and Wang (1993), Howarth (1996) and others discuss, the two types of consumption externalities (“classical” and “status”) can exist simultaneously and thus reinforce one another. That is, consumption for social motives can have negative impacts on the environment. Certainly, it cannot be denied that many forms of consumption should be questioned in light of the insights on finite natural resources and environmental degradation. However, we suggest to explicitly complement this perspective by pointing to the naturalistic underpinnings of consumer behaviour (section 3).

For socially motivated patterns of consumption need not be of an arbitrary kind, if another basic human want is served. We might thus pose the question if the consumption activity serves another purpose than social comparison.<sup>4</sup> In this context, the social significance of this consumption act might stem from the existence of a social norm which emerged as a non-monetary solution to an externalities problem. In fact, sociological writings point to the emergence of social norms for dealing with problems of externality. We discuss this context in the following section.

## **2.2 Social Norms**

Homans (1974) defines norms as follows:

A norm is a statement specifying how a person is, or persons of a particular sort are, expected to behave in given circumstances – expected, in the first instance, by the person that utters the norm. What I expect of you is what you ought to do. (p. 96)

According to this definition, the basic elements of a norm are: An addressee, an expectation in the normative sense (oughtness) - shared by a large group of people, reference to behavior (or attitudes and beliefs), reference to a certain scope in temporal or regional terms. A broader definition includes the dimension that norm deviation will be sanctioned with a certain probability (Opp, 2001). Yet another definition of norms, more common in economic writings, focuses on the existence of certain regularities in behavior in combination with the probability that sanctioning occurs when the respective behaviour is not performed (Opp (2001) terms this the ‘behavioural definition’).<sup>5</sup>

Norms are to be distinguished from conventions. A classical example for conventions are lunch time hours or driving on the right side of the road. Like norms, conventions represent behavioural regularities of a large group of people. They might entail an element of arbitrariness in the sense that there are for instance many possible lunch time

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<sup>4</sup> Certainly, the evaluation of the actual level of consumption is a separate issue. For now, we like to point out that the social significance of a consumption act might not be arbitrary, but serve a specific purpose.

<sup>5</sup> Opp (2001) names behavioural regularity (1), collective normative expectations (2), and sanctioning (3) as constitutive elements of most definitions of norms.

hours one can agree upon. In contrast to norms, the individual does not have any incentive to deviate from the behavioural regularity, as this would entail negative consequences for the individual herself. In other words, when a group of people with which the individual interacts portrays a certain type of behavior, it is rational for the individual to show the same type of behavior. Given this assumption, sanctions for deviating behavior are not necessary.<sup>6</sup>

Norms have been analyzed with regard to their modes of diffusion (e.g. Boyd and Richerson, 1985), and their impact on preferences (e.g. Bowles, 1998) and behaviour (Homans, 1974). We concentrate on the hypotheses concerning the *emergence of norms*. If norms are defined as expectations towards others, a theory of norm emergence, so Opp, should provide hypotheses concerning the conditions under which expectations about other people's behaviour will be formed. Moreover, it would be of interest to reflect upon the conditions leading to an internalization of the norm by the individuals. Finally, hypotheses have to be developed which address the conditions under which resources will be devoted to guarantee the norm acceptance, thus leading to behavioural regularities (Opp, 1983: 3-11; Opp, 2001).

Although social norms do play such a central role in mainstream sociology, only few writers are devoted to explain their emergence. Moreover, the majority of these approaches exhibit serious shortcomings. Opp (2001) claims that the seeming variety of sociological hypotheses can be condensed into what he calls the '*instrumentality proposition*': 'If norms satisfy the needs of a collective of individuals it is likely that they emerge.' This approach has often been criticised for committing a functionalist fallacy (Hempel, 1965, Ch. 11, Elster, 1982). For this is no description of the process of norm emergence, let alone that the individual perspective is completely neglected (it is a pure macro-approach). Moreover, norms are not "appreciated" for themselves, but only as means towards goal-achievement. Finally, the proposition contains the implicit assumption that the emerging norm will always be well-suited for realizing the actors' goal (Opp, 2001).

The missing individual perspective has been addressed by Coleman (1990) and Opp (2001), both sociologists. Their works are to be located at the interface between sociological and economic-rational-choice approaches (s.b.). Both seem to have been influenced by the contribution of Ullmann-Margalit (1977: 8), philosopher:

Norms do not as a rule come into existence at a definite point in time, nor are they the result of a manageable number of identifiable acts. They are, rather, the resultant of complex patterns of behaviour of a large number of people over a protracted period of time.

In this quote she hints to two characteristics of situations of norm emergence: complexity and social interaction (in contrast to a pure macro-perspective on "the social system").

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<sup>6</sup> Certainly, in case of the driving example, the assumption about the motivation of the group has to be modified. For deviation from the convention also negatively affects others and thus might demand some sanctioning mechanism.

The interaction based view is most explicitly analyzed in game theory (see Bicchieri (2006) for an overview). However, Ullmann-Margalit doubts that game theory can satisfactorily explain norm emergence: game theory does help to illustrate the benefit of norms for instance in a 'prisoners' dilemma' or a public goods situation, but it cannot explain how those norms would actually come into being from the perspective of a rational individual.

Without going into too much detail, there is an ongoing debate between sociological and economic approaches, concerned with the question why norms are complied with at all, and whether the rational choice framework is suitable for explaining norm-following behavior. Vanberg (2000) for instance argues that compliance with norms cannot arise from situation specific optimal choices.<sup>7</sup> Similarly can it be doubted if the framework of individual rationality can deliver hypotheses as to how norms emerge.

Leaving aside the rationality assumption for a while, how does the individualistic form of the instrumental hypothesis look like? In what follows, we draw upon the suggestions made by Opp (2001):

If individual actors wish that a situation S emerges, and if a norm N is instrumental for achieving S, the actor performs actions that lead to the emergence of norm N.

Opp suggests that, when certain additional assumptions are met, the individualistic instrumental hypothesis represents a fruitful approach for understanding both the emergence of planned and unplanned norms. Planned norms stand in relation to public goods whereas unplanned norms are related to private goals. The additional necessary assumptions to explain the emergence of planned norms are:

- 1) congruent goals,
- 2) widely shared correct information concerning the effect of the norm on the goals,
- 3) correct information as to which behaviour will lead to the emergence of the norm,
- 4) there exist (sufficient) incentives to portray the type of norm-beneficial behaviour.

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<sup>7</sup> To quote Vanberg (2000, p. 29-30):

A person's behaviour over time is [...] viewed as a sequence of separable choices, each of which can be accounted for in terms of the relevant situational circumstances. If, from such a perspective, one is to account for norm-following behavior (in the sense of a *general* compliance with a social norm), one would need to show that in each particular instance in which a person confronts a relevant choice situation, the respective situational circumstances make compliance with the norm the rational, utility-maximizing response. [...] This would seem to make genuine norm-guided behavior an extremely rare phenomenon, much less common, indeed, than sociologists, and common sense suggest.

Based on this observation, Vanberg suggests that norm compliance can be better understood within a framework that regards all of human behaviour as self interested rule-following. This approach implies that norms might be followed when this pays off *for the individual in general* – it represents a 'beneficial program.' On the contrary, the work of Bicchieri (who is a philosopher) stands in close connection to game theoretic approaches on the impact of norms. It circles around the idea of conditional cooperation: an individual will comply with the norm, when she expects a 'sufficiently large' group of others to also respect the norm, and when in such a case the individual prefers to abide to the norm (Bicchieri, 2006: 11).

Opp (2001) formulates that in terms of a causal model - whereby the actors' goal is to provide a public good: The more homogenous the goals of the group are, the "more correct" the knowledge of the actors is both with regard to the effects of norms on their goals and with regard to the effects of their behavior on norm emergence, and the more actors are faced with strong positive incentives to contribute to the establishment of a norm, the more likely a norm emerges that leads to the achievement of the goal (see table 1 for illustration, appendix).

Similarly, Opp (2001) lists the necessary conditions for *unplanned* norms to emerge, which have been first addressed by Sumner (1906). In general, unplanned norms are consequences of uncoordinated human action i.e. every individual behaves according to its private goals. However, norms emerge when many individuals share the same goals and take the same actions in order to achieve them. "Action" in this case refers to behaviour towards others. He summarizes them in the following statement ('private-goods instrumentality proposition'):

If individual actors seek to realize a personal goal which includes certain types of behaviour on part of the other actors, and if the acceptance of a certain norm by the others is instrumental for the realization of the personal goal, then the individual actors will portray such behaviour that the others will accept the norm.

The contribution of James Coleman has been very influential as well (Coleman, 1990). Coleman emphasizes two basic conditions triggering norm emergence: the 'condition of demand' and the 'condition of realization'. The former condition claims that a certain type of "problem" has to exist whose solution is envisaged via a social norm. Thereby, the type of structure of the social interaction plays a role. The interaction situation can for instance be interpreted as a public goods problem. In general, different conditions will trigger different types of norms. The latter condition of realization refers to the task of how to guarantee the compliance with the norm. The mechanisms of sanctioning are referred to here, as in the form of others (social ostracism) or (personal) emotions of shame and guilt (Elster, 1989). From Coleman we derive the following proposition:

**P.1** *New norms can be expected to emerge, when the structures of social interaction change and a group of people have to find new modes of interaction.*

Coleman's contribution has evoked some criticism. Obviously, Coleman does address the conditions of both norm emergence and compliance. The "middle layer" however, how the norm will be established, is not debated (this is where Opp's work fits in). Moreover, as pointed out by Elster (1989), Coleman still commits a functionalist fallacy, as a result of his focus on 'efficient' norms.

Obviously, when the assumption of "correct information" or "efficient norms" is relaxed an element of *consumer learning* and a way of dealing with the (stepwise) evolution of norms can be integrated into the analysis of norm emergence to complement the ideas of Opp and Coleman. We will pick up the list of Opp's assumptions later in the case study

(section 4). In section 3, we will come back to modes of consumer learning as well as origins of the conformity of goals and beliefs.<sup>8</sup>

To conclude, the theoretical contributions to norm emergence are quite distinct in sociology and economic game theory, as a consequence of the large divergences in the underlying behavioural models. The works of Opp and also Coleman point to a convergence between the approaches. However, for arriving at a more realistic framework of norm emergence some of the underlying assumptions have to be modified, especially concerning the knowledge of the actors.

### **2.3 The Connection between Externalities and Norms**

To summarize, norms are said to emerge when this benefits the goals of large groups of individuals, as in the case of a public good and negative externalities. The response of economic scholars to public goods problems focuses on monetary aspects directed towards appropriately raising the price of the externality producing activity - so to reduce the level of consumption. Norms on the contrary might solve externality problems in a non-monetary way, by making consumers contribute to the provision of the public good in the first place (Demsetz, 1967; Coleman, 1990, Ch. 10&11; Opp, 1983). Alternatively, a norm might for instance bring about a monetary compensation for the originator of a positive externality. More in general, norms emerge when a condition of demand exists and when there seem to be ways to enforce norm compliance (Coleman, 1990). Missing however, in all those accounts on norm emergence is a material specification of what these shared goals consists of. We provide a suggestion in the following section. Thereby, we also put forward propositions concerning the contingencies, which lead to the formation of new goals and the individuals' incentive to strive for their realization.

## **3 Consumer Learning**

### **3.1 The Theory**

The 'Learning to consume' (LTC) approach seeks to explain long-term transformations in consumption patterns, based on a more realistic account of consumer behavior (Witt, 2001). The theory starts from the following questions: *What motivates people to take certain actions, and how does consumer behavior change as a result of learning processes? How do goods become associated with a want-satisfaction potential?* At centre stage stands the concept of 'human wants' (not the notion of 'utility' or preferences), which is connected to the pioneering works of Menger (1950) and Goergescu-Roegen (1954) on the one hand, and insights from psychology on the other hand. For Witt (2001) links wants (or needs) to empirical findings in psychology on so-called primary and secondary reinforcers (Skinner, 1953) - wants are interpreted in terms of a motivational theory. The approach does not only deviate from traditional assumptions of neoclassical economics in terms of utility-maximization and the stability

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<sup>8</sup> Our impression is that the terms "efficient" and effective are mixed up in some of the discussions, for efficiency aspects are only then part of the analysis when the costs and benefits of different norms are compared with one another.

of preferences; the notion of preferences is completely abandoned as a theoretical building block of consumer behavior. Moreover, insights from other disciplines than economics are integrated (e.g. psychology, sociology), thus potentially enriching hypotheses' formulation concerning consumer motives and the forces behind transformations in consumption patterns. The notion of 'naturalistic underpinnings' of behavior thus comprises human wants and modes of learning.

Witt derives hypotheses about which kind of wants exist, why they change, and how they are related to observable consumption patterns. More generally, consumer demand is driven by the intention to remove deprivation with respect to wants, as this produces rewarding experiences. The corresponding heuristic to analyze consumption patterns therefore represents the interplay between states of deprivation and want-satisfaction. More precisely, wants represent behavioral dispositions which emerge from states of deprivation within an organism ('homeostatic disequilibrium'). Witt equates them with the non-cognitive level of human behavior. It is distinguished between 'innate' and 'acquired' wants. Examples for universally shared innate wants are the want for nutrition, cognitive arousal, health and social recognition (primary reinforcers). Acquired wants (secondary reinforcers) on the contrary are individually learned and might thus substantially differ between consumers. They are formed via 'associative learning' and yield rewarding experiences in their own right.<sup>9</sup> A prominent case is money which has been shown to be a strong secondary reinforcer (Camerer et al, 2005).

More in general, the central element of the LTC is the model of the "*learning consumer*". Emphasis is thus not put so much on concrete decisions, but on the way in which the consumer gets in contact with new goods and learns to appreciate them, as they serve to satisfy wants. On the one hand, new wants are acquired more or less unintended; on the other hand, explicit 'consumption knowledge' is built up, i.e. modes of insightful learning about how goods and services ('instruments') can be directed towards want-satisfaction. The acquisition of additional information might be biased, however, and adaptation need not lead to "optimal" results. Learning happens at the individual as well as at the social level. For learning at the individual level, 'reinforcement learning' plays a crucial role. Reinforcement means that actions which yield positive rewards (feelings) occur more frequently in the future whereas actions which induce pain will be reduced in frequency. In general, when the consumer understands that certain actions compromise the satisfaction of basic wants a change in behavior will occur.

*Similarities* in consumption patterns are assumed to occur within intensively interacting consumer groups. For consumers do not only learn on an individual basis. In addition to generating personal experiences in trial and error manner, 'social learning' occurs, economizing on individual learning costs. This means that consumers for their problem solution also rely on experienced others. This takes the form of observation or communication and imitation. Also the mass media function as sources of information, which might produce 'agenda setting effects'. Moreover, similarities in the learning patterns of a group can happen as a consequence of the association of a consumption act

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<sup>9</sup> This association emerges when former 'neutral' stimuli coincide sufficiently often with the satisfaction of innate wants. For a more precise description, see for instance Binder and Niederle (2006).

with the want for social recognition. In this case, the corresponding social reference group prescribes certain modes of consumption (see 3.2). To conclude, through learning processes, consumption patterns transform over time. A substantial growth in income, as can be observed for most industrialized countries for the last century, is the necessary condition in this process.

### 3.2 Propositions

Witt does not only point to consumer motives in the form of wants. With the satiation concept, the theory also addresses *how much* of something consumers want, and when and how this might change. This opens up the connection to the debate on energy conservation (in the form of promoting the reduction in levels of consumption). For this paper, the influence of other consumers - via the want for social recognition (SR) and also as sources of information - is of particular interest. The influence via the want for SR implies that it is not (only) the individual to determine the level of consumption which yields want-satisfaction. Instead, a group of other consumers defines which level of consumption has to be portrayed so to receive a positive social feedback (i.e. rewarding experiences). In LTC terminology, the forms of relative/status consumption as well as norm-conforming consumption belong to this form of a socially defined level of want-satisfaction. This section addresses both the impact of the want for SR and the social-cognitive learning processes.

The writings on norm emergence point to certain 'goals' which the society or the individuals seeks to realize and whose achievement is believed to be guaranteed by a social norm. In this section, we address the following questions: Why might several consumers share the same goals? And how does the awareness of a problem emerge? Why are social norms the taken measures to solve the problem? We argue that the LTC approach can shed some light on all these questions. The first question will be dealt with only shortly. LTC points to the existence of universally-shared human wants such as health, food or social recognition. Obviously, consumers share the same broadly defined goals as a consequence of their genetic inheritance. Binder and Niederle (2006) categorize innate wants as parts of 'substantive human preferences'.<sup>10</sup> Psychological findings indicate that if the satisfaction of these primary reinforcers is hindered, humans are motivated to take actions which restore the homeostatic equilibrium. However, the degree of deprivation with regard to these wants need not coincide within consumer groups. We suggest to specify Coleman's 'demand condition' in terms of states of want-deprivation. Based on the aforementioned insights on consumption externalities and social norms, we can formulate the following proposition:

**P.2** *For a large group of consumers to share the same goals at the same time and the same place ("problem"), a "common force" must exist which affects the status of innate wants of all consumers alike. A large group of people are simultaneously deprived in their innate wants, when social networks change and new consumption externalities emerge.*

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<sup>10</sup> They use them as a building block of a theory of institutional change.

In what follows, we will address the question how the awareness of the problem emerges. We specified “problem” in terms of deprivation with respect to basic wants, as a consequence of consumption externalities. So far, we identified one general contingency giving rise to consumption externalities - and potentially triggering the formation of a social norm. Now, we discuss the aspect that the beliefs concerning the (pure) existence of the externality matter. For reactions to externalities, for instance in the form of norms, only occur when there are beliefs about their existence. Here, we relate to the LTC approach and its empirically informed assumptions about cognitive learning. Our general approach however is inspired by Mokyr’s ideas on how changes in the ‘epistemic environment’ of consumers translate into changes in beliefs and behavior (Mokyr, 1993; Mokyr, 2001). Our line of argument is as follows: Social norms might not only emerge, because consumption externalities exist and can be “experienced by the senses” (individual reinforcement learning). Additionally, norms might arise when beliefs about the existence of consumption externalities are formed, and conjectures exist as to its origins. For then the origins of externalities can be addressed with social norms. That those beliefs are developed is again contingent, namely on observability and measurability concerning the phenomenon itself, as well as the causal relationships between behavior (origin) and externality. In this regard, many writers have pointed to the role of scientific progress (e.g. Mokyr, 2001):

**P.3:** *Social norms emerge in times of scientific progress concerning the origin of consumption externalities.*

When there exist conjectures within a society as to the origins of an externality, norms can emerge because there exist beliefs about which type of behavior has to be undermined or fostered. To make this clear: Social norms represent an alternative to monetary solutions to consumption externalities. They are especially preferred to taxes or contracts when not a monetary compensation is envisaged but the problem elimination. The literature has proposed different explanations for the emergence of social norms. One account says that individuals behave in accordance with their own motivations, and a behavioral regularity is established which is self-reinforcing (s.a.). We now want to reflect upon why a large group of individuals portrays the same kind of behavior which eventually leads to a norm. Here, we can build on the assumption of common goals as introduced at the beginning of the section. We conjecture that if people share the same goal and experience the same problems, they individually take actions to solve the problem. A congruity of the actions taken then arises when “social-cognitive learning” takes place due to the absence of “personal recipes”:<sup>11</sup>

**P.4** *The more difficult it is for the individual herself to evaluate the effectiveness of instruments for want-satisfaction, the stronger will be the influence of others (peers, “experts”, the media) on the measures taken.*

The notion “measures taken” includes the level of consumption. Before we now confront these conjectures with the demand for cleanliness (section 4), we shortly summarize the

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<sup>11</sup> A similar hypothesis is developed in the dissertation of Andreas Chai (Chai, 2007: 69) in the context of expert advice and medical treatment.

conclusions of this section. The abovementioned propositions relate to social influences on consumer behavior. We showed under which conditions these influences are not of an arbitrary kind. The connection of a consumption act to social factors might result from the existence of a consumption externality, which can be defined in terms of deprived innate wants. Hence, the behavioral reactions in terms of the emerging social norm can be traced back to a fundamental reason which affects many consumers alike.

## **4 Case Study: The Demand for Cleanliness**

### **4.1 The Demand for Cleanliness**

In the following, we will confront the aforementioned hypotheses with the demand for cleanliness in relation to the household activity of clothes washing. Nowadays, the greatest part of households in industrialized countries possesses a washing machine. In the US for instance the diffusion degree amounts to 80% (EIA, 2006). The utilization of washing machines requires an input of electricity and water, thus contributing to the problems of resource depletion and pollution.<sup>12</sup> Hence, the activity of clothes washing represents a possible candidate for reflecting upon changes in consumption standards. Even more so, as surveys indicate that clothes are not only washed for health reasons but for social reasons as well. More precisely, a cleanliness norm seems to exist today (SIFO, 2003). To which extent is clothes washing a mere social phenomenon, causing status- and environmental externalities at the same time?

Let us take a closer look at the fact that clothes washing is related to the social standing of a person i.e. the basic want for social recognition. Then, in LTC terminology, the level of satiation with regard to the demand for cleanliness is socially defined (in contrast to an individually defined satiation level). Collins (2006), drawing upon Douglas (1984), points out that society defines what “being clean” means (in terms of stains on clothes, smell etc.). In other words, cleanliness represents a social construct. Now, if cleanliness is relevant for the social standing of a person, and the definition of cleanliness changes, this would affect consumer behaviour. That the understanding of what cleanliness means has indeed evolved during the past two centuries, is nicely reflected in household advice books, popular novels and advertisements in the media such as women’s magazines (Matthews, 1987). More in general, throughout history, cleanliness has been related to different, theoretically objectively measurable levels of cleanliness - for instance in terms of smell or stains on clothes.

However, not only the definition of “clean”, but more importantly, the amount of people which were addressed by this definition has changed over time. Taking a look back into history, we see that cleanliness has for long been an issue of status. The status connotation of cleanliness was still present in many European countries until the middle of the 19<sup>th</sup> century (e.g. Strasser, 1982). For only few people could afford to take care of their outer appearance that much. Back then, cleanliness did not represent a norm yet, imperative for everyone in society. Only few people have been “clean” in terms of the

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<sup>12</sup> Calculations from the University of Bonn can be found here: [www.haushaltstechnik.uni-bonn.de/waschtag/index.htm](http://www.haushaltstechnik.uni-bonn.de/waschtag/index.htm) (21.04.2007).

prevailing definition, so that this was still a mode of distinction. Nowadays, cleanliness especially in the form of absence of smell seems to be a norm, directed towards every member of society (SIFO, 2003). This norm can be summarized in the following imperative: “one has to be clean” – it refers to the expectations that consumers have towards others. With the emergence of the social norm, cleanliness turned into a mass-phenomenon. As a consequence, the status connotation of cleanliness vanished. How can such a transition be explained which implied a loss in social standing for the upper class?

What has to be done in order to comply with a norm represents a convention. As the understanding of cleanliness has evolved, it has also changed what has to be done to fulfil the norm. The convention depicts how cleanliness is achieved via laundry patterns, implying a certain frequency of changing the clothes and a certain mode of laundering more in general (e.g. temperature). Conventions also affect which clothes “enter the laundry basket” in the first place, which kind of fabric is worn, and to which degree clothing is differentiated with regard to occasions (Klepp, 2003; Shove, 2003).

How and why this cleanliness norm might have emerged will be dealt with in the next section (4.2).

## **4.2 The Cleanliness Norm**

Many writings devoted to explain certain historical phenomena can be put in context with a theory of norm emergence. Elias (2000) for instance gives examples for substantiating his hypotheses that over the past centuries, the number of restrictions on behavior has increased (he illustrates for instance the change in table manners). He links this to the increasing division of labor and social interaction more in general. Opp (2002) depicts the spontaneous evolution of an unplanned non-smoking norm as a consequence of changes in scientific knowledge and knowledge dissemination, followed by adjustments in the individuals’ behaviour towards others. Again, individuals might strive for their personal goals, but a norm emerges, as a sufficiently large group of people changes their behavior in the same fashion.

In the writings of Joel Mokyr, economic historian, many historical examples can be found on how changes in social networks led to the emergence of new “problems” (Mokyr, 1993; 2001). A recurrent theme is the feedback between industrialization, the emergence of enterprises, urbanization, and the outbreak of epidemics. The general effect of changes in social networks which these writings point to is the transfer from private to public organization: issues which in former times have represented people’s private business, e.g. such as waste disposal, now require organization at the public level. For the individuals’ behavior now has impacts on the closest social surroundings – the structure of social interaction has changed. Very often, these changes in social networks have been side-effects of other actions and goals, like people moving to the city for the prospect of finding a job and thus intensifying urbanization. Thus, the individuals themselves induced the “problem” – it is endogenous. However, the problematic effects have not been intended and maybe not even anticipated. They arise because many people behave in the same way, based on their individual motivations.

We will now address the emergence of the cleanliness norm which nowadays seems to affect consumer behavior (SIFO, 2003). We argue that the cleanliness norm emerged in the middle of the 19th century in many industrialized countries such as the UK for a fundamental reason: it helped to solve the problem of the spread of infectious diseases, which figured prominently in times when social networks radically changed during urbanization and industrialization.

To start with, we have not found any piece of literature which explicitly deals with the emergence of a cleanliness norm. However, many sociological studies trace how the understanding of cleanliness evolves over time, covering periods from the beginning of the 18<sup>th</sup> to the middle of the 19<sup>th</sup> century (e.g. for the UK). These authors analyze literature, household advice books and other indicators of the prevailing ideology. The standards of cleanliness and housekeeping more in general are related to religious and political movements. Matthews (1987) for instance elaborates upon what she terms the rise and fall of 'the cult of domesticity'.<sup>13</sup> Other sociological works trace the changes in the status of the housewife, relate it to the decline in domestic servants (middle of the 19<sup>th</sup> century) and the merger of the social classes, and discuss the "paradox" that time-saving appliances seem not to have significantly reduced housework time (Cowan, 1983). More in general, these authors identify what they call a 'rise in household standards', resulting from the 'insourcing' of household tasks and the fact that for instance the adoption of the washing machine had led to more laundry being done. We conclude that the cleanliness norm which nowadays exists, emerged in the 19<sup>th</sup> century, and affected the amount of laundry that has been done, and the number of people who demanded cleanliness (homogenization of consumer groups).

As to the triggering factors of the cleanliness norm, much information can be found on the works of Joel Mokyr, who analyzes the process of rising urbanization, industrialization and the health conditions in Great Britain (e.g. Mokyr, 2001). During industrialization, people moved to the cities to work in the emerging factories. Up to the middle of the 19<sup>th</sup> century, urban regions in the UK had to cope with serious hygienic problems, putting at risk the health of the inhabitants (Mokyr cites the 'Chadwick Report' of 1842). These problems were deteriorated by the fact that so many people closely lived together in an urban environment. Especially infectious diseases were still not under control. We interpret the existence of infectious diseases (in the middle of the 19<sup>th</sup> century) as Coleman's '*demand condition*' for the emergence of the norm in the sense that the satisfaction of the basic want for health has been put at risk. Each individual herself must have realized the problem and can be assumed to have searched for ways how to solve it.

Now in the middle of the 19<sup>th</sup> century the so-called 'hygienic movement' started. It was triggered by scientific progress in terms of understanding the causes of infectious diseases (Mokyr, 2001). This newly acquired knowledge has been communicated to the public, under the efforts of 'home economists', who founded an own association in 1908

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<sup>13</sup> She dates the emergence of the genre of the 'domestic novel', in which the merits of 'good housekeeping' have been praised, to the middle of the 19<sup>th</sup> century.

(US), devoted to achieve knowledge progress in terms of scientific housekeeping. Sociological studies provide a detailed account of how knowledge dissemination via 'home economists' took place in women's magazines, housework courses and the like (e.g. Hardyment, 1988). These historical facts point to knowledge progress and knowledge dissemination, potentially altering the *beliefs of a large group of people* in the same manner.

Taking together the collected facts, the norm emergence can be traced. Moreover, the norm in terms of the promotion of cleanliness seems to have been a logical solution to the health problems which were prominent at the time of its emergence. Naturally, each individual would have a personal interest in raising her standard of cleanliness, for it contributes to the satisfaction of the want for health. Still, two other aspects complement the picture. First, the individual herself could not evaluate which measures would best lead to goal-realization in terms of avoiding infectious diseases. That is why the individual was especially open towards suggestions given by scientists. Secondly, deviations from the standard seem to have been sanctioned: e.g. children had to undergo a "cleanliness check" before being allowed to school. (Klepp, 2007 for Norway). This point illustrates why the cleanliness norm actually dealt with a form of consumption externality that it solved: one person who did not display the necessary hygienic standard, and got in contact with other people (for instance at work or at school) would have a negative impact on the health and welfare of others.

To summarize, for the case study of clothes washing, the want for social recognition seems to dominate modern consumer practices. Nevertheless, when the change in consumption standards becomes debated, complementing the constructivist concept of cleanliness by a naturalistic element seems to be a fruitful approach. For the positive message of constructivism - i.e. if cleanliness represents a mere definition, only this definition has to be modified, for instance on the basis of a mutual understanding (Frank, 1999) - might be misleading. In fact, it might cause an uninformed deterioration in consumer welfare, resulting from the fact that the reasons underlying current practices have not (sufficiently) been accounted for.

We argue in this paper that although dirt might represent a social construct, the changes in the definition of dirt follows specific patterns which are related to consumer learning processes. Moreover, even if dirt is a construction, actual laundry patterns correlate with an objectively measurable level of cleanliness in terms of hygiene (and also aesthetic criteria). This level is connected to the naturalistic underpinnings of consumer behavior in the form of the human want for health. In short, different levels of cleanliness in terms of laundry practice can be attributed different hygienic states. We argue that the underlying want for health of this socially-connected consumer activity contributes to explaining how the cleanliness norm came into being in the first place, given other contingencies which triggered norm emergence.

To conclude, the notion of hedonic treadmills might be misleadingly attributed to the demand for cleanliness, which nowadays exhibits a strong social component. However, taking a closer look at the modern circumstances of social interaction, we see that the

contingencies which justified the norm emergence do no longer hold. Although the intensity of urbanization and social interaction has certainly increased, no longer do European countries suffer from serious infectious diseases (apart from the cold). More in general, due to big leaps in medical progress the necessity of preventive health-care has partly replaced in favour of curative medicine. Still, the SIFO report on laundry practices in different European countries illustrates that not all parts of laundry practices can be termed exaggerated or unnecessary (SIFO, 2003). For instance, the disinfecting potential of laundering is substantially reduced by lowering the temperature for means of energy savings. It will therefore remain the task of those who opt for a change in cleanliness standards and resource use to find out how this can be solved without deteriorating consumer welfare.

## **5 Implications for Reductions in Consumption Standards**

The substantial increase in residential electricity demand over the last century (EIA, 2006) can be understood only with respect to the demand for domestic appliances, and their use within housework activities. The utilization of washing machines for instance requires a substantial input of electricity and water, thus contributing to the problems of resource depletion and pollution. Hence, the activity of clothes washing represents a suitable candidate for reflecting upon changing the standards of consumption. Even more so as the social significance of cleanliness seems to be much more relevant today than the health motive (SIFO, 2003).

However, one cannot refrain from asking which other motives, apart from the current, prominent ones, are related to a household activity when a change in standards is envisaged. As the want for social recognition is a very general one, it can in principle be “connected” to any kind of consumer behaviour. The analysis was guided by the intuition that sometimes, there might be a specific reason for the fact that a consumer activity is connected to the want for social recognition. Thus, one might want to analyze *why* a specific activity and the goods used therein became associated with this want - or more precisely, with a social norm. For the corresponding consumption activities might not be of an arbitrary kind, and the reduction in standards should be handled with caution.

We connected the ideas on the emergence of norms (from sociology and game theory) to the evolutionary framework of consumer learning, LTC (Witt, 2001). We adopted the sociological hypothesis that social norms might have emerged as a reaction to potential consumption externalities. We extended this line of argumentation by reflecting on the contingencies, which triggered the emergence of externalities and the reactions towards them. Inspired by the insights from the works of Joel Mokyr, we especially focused on the role of knowledge progress and changes in social networks.

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