

The role of social processes for sustainable consumption

Tania Briceno*, Sigrid Stagl

School of Earth and Environment, University of Leeds, Leeds LS2 9JT, UK

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Abstract

Rethinking the role consumption plays in individual well-being and societal development is key for addressing pressing environmental problems. We perceive the need to envision consumption as a social activity, which requires the active engagement of consumers in order to better enhance their quality of life. The paper focuses on the framework of Product Service Systems, one particular programme for more sustainable consumption. After reviewing the potential benefits and limitations of this programme, we explore the opportunities to learn from participatory and community-based strategies like LETS.

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1. Introduction

Current consumption patterns are a principal cause of environmental problems. Yet the assumption that more consumption is necessary for increasing quality of life has, to some extent, limited policy designed to alter consumption patterns. This paper focuses on the development of alternative forms of consumption and the possibilities of improvement in the social and humanistic aspects of well-being. For this purpose, real world initiatives of sustainable consumption, which relies on social processes and engagement, will be brought forth.

The paper draws on different theoretical frameworks to illuminate effective methods of implementation and dynamics for sustainable consumption programmes. First, the gradual move away from social and humanistic goals in consumption systems is explored and then evaluated. The theories on which the evaluation is based include the *needs-approach* as an explanation of consumption drives and human well-being, and the role of *social capital* in defining and shaping consumption patterns. This section refers throughout to *Product Service System* (PSS), one of the prime programmes for reducing environmental impacts from consumption. The second part of

the paper presents a case study of a sustainable consumption programme with strong social components, Local Exchange Trading Systems (LETS). We consider LETS as a community-based programme which employs PSS-style initiatives. While traditional PSS are normally more efficiently organised and comprise a wider range of businesses, we argue in this paper that PSS could learn from LETS about the social and humanistic dimensions of the transition to more sustainable consumption patterns. Primary data gathered through a survey looks at the attitudes and behaviour of participants in LETS programmes. The findings from the survey are compared to secondary data from previous studies of LETS programmes.

2. Consumption in its social context

Many of the problems of consumption are deeply embedded in the social context [1–3]. The unsustainable appropriation of resources can be linked to socio-economic structures as well as individual actors' options and choices [4]. The disregard for social processes in research and policy efforts jeopardises the achievements that can be made in the direction of sustainable consumption. In this paper, we argue that the social processes involved in consumption as well as the multiple aspects of human needs are essential components to consider when developing sustainable consumption programmes.

* Corresponding author.

E-mail address: tania.briceno@elf.mcgill.ca (T. Briceno).

The social implications of consumption deserve much greater scrutiny than the traditional assumption that quality of life is directly dependent on the consumption of goods. Many more dimensions are at play in the process of consumption, including some key humanistic and social dimensions that have the potential to make great improvements in quality of life and environmental conditions. We define humanistic aspects as the non-material needs to be satisfied through consumption, such as consumer engagement and participation, whereas social aspects refer more to the dynamics and social shaping involved.

There are a number of examples that illustrate how the decrease in collective and participatory activities has been associated with more material-intensive consumption and given way to new social systems that reinforce these cycles. For instance, the trend towards a decreasing number of people per household has been associated with an increasing demand for household appliances and services, creating new preferences and patterns of consumption centred more and more on the individual [5]. Also, the increased number of private cars has left fewer and fewer resources for public transportation and made consumers increasingly dependent on the former. Collective sharing schemes and maintenance and repair services have become less frequent [4]. Many of these new trends of consumption have altered community life and decrease public forms of ownership and management.

The emergent consumption systems have not necessarily implied improvements in well-being, as the prioritisation of economic goals over social ones has many times excluded social and humanistic elements of well-being. As Karl Polanyi argued, instead of economies being embedded in social relations and goals, social relations have become increasingly embedded in economic life [6]. As a result we have seen norms of reciprocity, redistribution, and communal obligations become less frequent in industrialised countries [7] and efforts to manage collective resources become ever more difficult [8]. In this light, consumption problems are decreasingly envisioned as collective in nature and active participation and social decision-making in production and consumption systems becomes more indirect [9,10].

The lack of active social engagement and collective decision-making continuously distorts socially optimal decisions. At the individual level the incentives to adopt more sustainable behaviour are in most countries weak. Consumption of many commercial goods and services falls in a vicious cycle of consumers striving to have the same or more than others around them. This phenomenon works as a social push, and trap, of ongoing growth since many of our needs and wants are relative to the circumstances of others around us and depend on the aggregate of all the individual decisions [9]. Therefore as some individuals increase their consumption, everyone else faces a higher reference point, ultimately pushing the whole society to higher consumption levels. Hirsch [9] has referred to this relative characteristic of consumption as ‘positional consumption’, resulting from competing individuals unwilling to work together to envision their life as intimately interdependent.

Individualisation trends in society work at many levels to influence consumption patterns [4]. As people liberate themselves from social and cultural bonds related to locality, religion, or class

norms, there has been a tendency to define identity within the emerging individualised commercial culture [4,11]. In many cases, the processes of creation of social meaning and structures are beginning to revolve, more and more, around consumption activities [12]. In addition, more individualisation has been associated with a decrease in the sense of security that was once derived from community relations and traditions and which is now being partially compensated with consumption systems and structures [13,14]. Consumption as the search for comfort and stimulation has been substituting for some of the voids created in increasingly individualised societies. The lack of social relations and coordinated action thus seems to have the potential to intensify the demands being made from the world of material consumption.

The transfer of day-to-day activity and social relations into the formal economy has also had an impact on consumption related problems [4]. Over time, more labour and consumption has been devoted to the commercial sector in lieu of the household or the community. The result has been a decrease in informal networks of civil society that generally organise collective activities such as the sharing of capital goods, community improvement projects, and educational activities [14]. Private consumption has increased and global market networks have become more abstract, complex, and trans-national; making it harder to reflect, engage in, and have control over the consumption process [15].

Therefore, the problem of unsustainable consumption patterns goes beyond the biophysical capacity to sustain economic systems in the long run [16]. Social limitations also require change in consumption systems in order to integrate social responsibilities. For instance, distribution and social justice issues are very problematic aspects of current patterns of consumption that compromise both short and long-term social welfare [17]. Indicators like the ecological footprint illustrate that more consumption for some implies less consumption for others due to the limited capacity of ecosystems to provide resources and absorb waste [18]. Moreover, there is no consistent relationship between greater individual consumption and improved well-being and there are many instances where quality of life has actually decreased with greater consumption [19]. All of these factors highlight the importance of making sustainability measures more socially aware.

In the Veblenian tradition, consumption can be envisioned as a social activity, by exploring the driving forces and motivations beyond the individual. Some of the most important and deep-rooted causes of consumption are social in nature, and hence methods to alter consumption patterns must acknowledge these characteristics. The social factors identified so far set the context for the need to make radical structural and social changes to approach problems of unsustainable consumption effectively.

3. Theoretical framework

3.1. Product Service Systems (PSS): a programme of sustainable consumption

The role of social and humanistic dimensions in sustainable consumption programmes will be explored using the

framework of Product Service Systems. These entail a shift from individual product ownership to a managed arrangement of utility provision via a mix of products and services subsequently reducing aggregate material consumption [20,21]. Therefore, instead of purchasing a car, for example, one would purchase mobility services that may include a car-sharing system or a combination of transport modes. Moreover, by framing consumption at the system level, PSS highlight life-cycle impacts from production to disposal and have clear impacts on the various actors and social dynamics involved [22,23].

The PSS approach re-evaluates consumption needs and wants and promotes alternative mechanisms for satisfying them. It can encourage collective activities by advocating systems of leasing, sharing, and/or pooling of resources as well as alternative institutional structures that enable these kinds of arrangements. PSS result in more intensive use of products and tools for consumption as well as more producer-consumer and consumer-consumer interaction [20]. Consequently, PSS at least have *the potential* to include more holistic solutions to the problems of consumption, given their advocacy for new consumption frameworks with new social dynamics and need-fulfilment processes. (For discussions on specific aspects of PSS see also special issue vol. 11, no. 8 of this journal.)

Conceptually, PSS give way to socially oriented and participatory solutions for consumption problems; yet their development has been vulnerable to the frequent overemphasis on economic goals, utilitarian perspectives, and consumer disengagement. Most research and policy attention has been given to producers, looking for economic incentives to improve efficiency and reduce costs and burdens of environmental regulation [20], rather than to social or humanistic implications. Cumbersome assumptions such as exogenous consumer preferences and the association of quality of life with material consumption have been kept out of discussion in the application of PSS. The general unwillingness to influence consumption patterns based on unsustainable attitudes and beliefs can be a limitation to the ability of PSS to contribute to a transition to more sustainable consumption patterns [24].

From an environmental point of view, many PSS programmes have not been satisfactory. Many programmes have used the structural concepts of PSS but have not taken any environmental consideration [25,26]. Among those that have shown an interest in reducing environmental impacts, the results have been disappointing in terms of environmental achievements. Most programmes have been far from reaching sustainable levels of resource consumption.¹ Further, rebound effects have reduced the effectiveness of PSS, as efficiency improvements increase aggregate consumption made possible by increased income savings and consumption time [20,27,28]. Therefore life-cycle improvements of consumption activities through PSS are frequently not realised, possibly due to the

larger socio-economic context at play promoting values of personal accumulation, individualisation, and material comfort.

Overall, the success of PSS as sustainable consumption programmes depends on the implementation of the programmes at the system level [22,29]. Entire economic chains and sub-sectors need to develop with the programmes to create system innovations bringing in new goals and considerations. It is not enough to focus on a switch to services as solutions, as these are not sustainable in and of themselves. Instead a redesign of economic systems, where all players and stakeholders can be involved is necessary to make real transitions to sustainable societies [22]. The consumer society exists at different levels of the socio-economic system; hence changes need to be all encompassing and inclusive to have a solid basis of sustainability principles [30].

3.2. Human needs and consumption

The ‘human needs approach’ is useful as an exploration of the relationship between consumption and well-being as it explains many of the social and behavioural aspects of consumption as well as the theoretical meaning of our economic systems [31,32]. The production of goods and services can be seen as the production of satisfiers, which are consumed by individuals to extract satisfaction [33]. The particularity about the needs approach to consumption is that our needs are said to be finite, few, and to some extent universal [34,35]. This theoretical framework sheds light on the nature of many consumption problems and the inefficiencies of current economic systems at satisfying fundamental needs and enabling further social developments.

The study of needs illustrates the different dimensions of human existence. One of the most elaborate needs frameworks, developed by Max-Neef, classifies needs into nine main categories, which include subsistence, protection, leisure, participation, affection, freedom, understanding, creation, and identity. These needs happen simultaneously (except perhaps for subsistence needs) and they can complement or substitute one another depending on how they are being satisfied. Satisfaction happens in four different ways; by doing, having, being and/or interacting [10] with an infinite number of specific satisfiers, which are relative to culture or to social circumstances [33].

In essence, the different human needs have physiological, social, and/or psychological dimensions, which explains the importance of having different kinds of satisfiers [34]. However, in the current economic system there has been an overemphasis on material needs and on the object of satisfaction rather than on the need [10]. Current consumption patterns have resulted from expanding material satisfiers creating new sets of wants, which have many times become more and more distant from the original needs being, represented [12]. The reliance on commodities for the satisfaction of different and complex needs has made satisfiers more inefficient.

The result has been a deprivation of many non-material needs; the satisfaction of which seems to be increasingly sought through material consumption. As Kamenetzky [37]

¹ It has been argued that a sustainable society would have to rely on about 10% of the resources consumed today by industrialised countries [20,36]. Mont [26] argues that when environmental improvements have been made through PSS they have been of the factor range of 1.7–2, therefore far from the necessary targets.

points out, “when one need or another goes unsatisfied- humans frequently find distorted paths for reducing the pain associated with the deprivation of the corresponding satisfiers. It has been shown that the lack of satisfaction of the need for emotional and physical communication gives rise to strong drives for power, domination, violence and possession, and consumption of goods” (p. 181–93). Overall, it has been found that material commodities are effective satisfiers for material (physiological) needs but poor satisfiers of psychological and social needs. The more material means are used to satisfy these needs, the less they are actually satisfied [34].

In rich countries, social and humanistic needs seem to be the most neglected ones due to the structure of consumption systems and their approach to human needs. In particular, the decreasing opportunities for direct human agency and involvement in need-fulfilment processes coupled with an over-emphasis on end-product satisfaction have been problematic aspects of current consumption patterns [29]. Initiatives like PSS must avoid equating the delivery of immediate, utilitarian services with need-fulfilment, as it disregards the role of human engagement in the attainment of satisfaction and the wider context of consumption activities.

The growing passivity of consumers in the economic system can be disempowering by limiting the satisfaction of many humanistic and social needs. By being at the receiving end (final consumption) of other people’s actions, consumers can be restrained on their consumption choices. The involvement and engagement of consumers in the creation of goods and services yields potentially direct satisfaction for non-material needs such as participation, autonomy and creativity. If these needs are not effectively satisfied, the resulting voids can lead to increased material consumption [11]. The findings from the ‘needs approach’ advocate institutions, which promote full and free participation of all social groups [37] as well as self-reliance and endogenous satisfiers to create satisfaction in process [10]. Participatory strategies and collective evaluations of needs can help make PSS programmes more efficient, welfare enhancing, and sustainable.

3.3. Social capital and diffusion networks

A socially aware approach to consumption requires an evaluation of needs and goals as defined through collective ideas and visions [29]. The concept of social capital is useful in this respect, improving the programmes’ implementation processes and making them more responsive to social concerns. By definition, social capital is “the set of social relations, norms, and institutions of a society” [38]. More particularly, it refers to social organisations, levels of trust, reciprocity norms, and social networks that can increase the efficiency of a society by instigating collective action [14]. Increasing social capital in sustainable consumption programmes would imply enhancing interpersonal relations and creating more active and engaged communities achieving collectively established goals.

Through social interaction and the existing social culture, cognitive processes and preferences develop and shape

consumption behaviour [40]. Behavioural changes are most effectively achieved through initiatives delivered at the community or group level as they help to remove the structural barriers to change, enhance the rate of adoption through socialisation processes, and increase the benefits derived from the assets of social capital itself [16,40]. Social interaction has been found to exert the most influence on attitudes and behaviour [40,41]. People interact with each other to actualise their sense of being and well-being and to form many of the symbolic and communicative aspects of consumption [34].

Social capital can itself enhance quality of life aspects while reducing consumption, making the consumption process more efficient at its delivery of satisfaction. Improving social relations and community life can directly satisfy many social needs and indirectly enable the fulfilment of other psychological needs [10,14]. In addition, more trust and communication between economic actors induces more cooperation between different levels of consumption systems, reduces inefficient competition for resources, and increases the provision of locally appropriate and collectively owned goods. Social interaction helps to develop effective institutions addressing social problems, facilitates collective action, and produces economies of scale [38].

Further, a socially oriented vision is a requisite and integral part for the diffusion and adoption of sustainable consumption programmes. Effective PSS programmes will ultimately be system-wide innovations because they affect individuals and interests at various levels and require considerable co-ordination and co-operation of different actors [22,25,42]. Changes of this kind and magnitude can be better achieved with inclusive and participatory processes. The theory of ‘diffusion of social innovations’ points to the importance of understanding the culture, local environment, and individuals of a system before an innovation can be spread throughout a society [41]. New programmes must be compatible with values, beliefs, and past experiences of a locality for them to be adopted. In addition, the structures of the diffusion system in terms of the channels of communication, diffusion networks, involvement of participants, and incentive mechanisms are determining factors on the penetration of new social systems [41].

Overall, empirical findings illustrate the importance of social relations, networks, and participatory institutions in bringing about the kind of social change needed to adopt more sustainable consumption. Research on diffusion processes has found that there is a proportionate relationship between the level of social participation and the level of adoption of innovations [41]. The inclusion of different players facilitates the co-operation and synchronisation of individual innovating efforts and can help to form networks of complementary partners [22]. In addition, people’s different roles and interests in society; as consumers, workers, share-holders, or citizens can be better expressed and accounted for in participatory processes.

From these empirical results and theories discussed in this section, we derive the proposition that programmes like PSS need to give more attention to the wider context of the problems to direct changes toward more sustainable development

paths in the most appropriate ways. So far, the exploration of consumption problems reveals deep-rooted social phenomena and suggests a need for pro-active and participatory solutions. The spread and penetration of programmes like PSS seem to depend largely on the ability to influence consumer behaviour and to co-ordinate the different players that would be involved in a system's transformation [26].

4. Methodology

4.1. The LETS case study

In order to test the performance of socially oriented and participatory programmes, this section brings together data from on-going community projects using PSS principles. They are called Local Exchange Trading Schemes (LETS) and although, in theory, their priority is not sustainable consumption itself, they share some of the characteristics of PSS programmes; such as the advocacy for sharing, leasing and pooling of resources for consumption activities. The empirical data of this case study illustrates the experience of consumption systems focused more on social and humanistic needs. The data was collected from the following sources: a survey distributed to participants and organisers of LETS in the UK; a review of pamphlets and newsletter distributed by the central administration, LETSLink UK; and secondary data from previous studies.

In essence, LETS are systems of exchange among people in a community where members can offer any service or product they are able and willing to provide and purchase other goods and services offered in the community. There is a tendency to promote services over products as people develop ways to provide utility from tools and resources at their disposal. They operate at the community level and promote economic self-reliance.

The main priorities of LETS are to create social cohesion and inclusion in communities as well as more social equity [43]. By increasing social interaction and by giving people a medium to help each other, they develop and encourage the experience of the community [44]. Originally, LETS were based on a green agenda as alternatives to unsustainable patterns of economic growth [43] and its detrimental social consequences. Overall, they give interesting and useful references on the experience PSS-like initiatives with strong social components.

4.2. Survey design and methodology

In the UK, as well as in many other countries, LETS-types of programmes have been attracting a growing number of people and interest. LETS in the UK have increased from 92 schemes in 1992 to about 300 today, including some 22,000 participants.² The survey in this research was based on the

UK experience and it included 50 responses from organisers and participants from 27 different schemes.

The survey covered a total of 17 questions looking at the existence of social capital and its benefits to the system and members; the amount of sharing, leasing, and collective activities that take place; the perception, attitudes, and engagement of people in the programmes; their effectiveness at satisfying needs in innovative ways; and the dynamics of green social networks inside LETS. Most of the questions were closed-ended but had a section for additional comments, clarifications, or examples. Therefore the data collected was both quantitative and qualitative.

There were three forms of responses: online through a website (60% or 30 respondents); as an attachment on e-mails (14% or 7 respondents); and through telephone interviews (26% or 13 respondents). The only stratification was that telephone respondents were from the Yorkshire region in the UK.

When interpreting the results, it is important to acknowledge some limitations regarding the sample population of the study. First, the sample size is not large enough to make strong conclusions generalised to the whole population. Moreover, the methods of data collection had a bias favouring those with access to computers and Internet, as most people were contacted via electronic notices and encouraged to answer an online questionnaire.

In spite of the limitations concerning sampling techniques, the profile of respondents seems consistent with other more detailed studies (see for example [45,46]) and in relation to the different sources of data. For instance, age range and income categories in the UK sample and in the Yorkshire sample were similar. The majority of LETS members in both samples tend to be middle aged (40–60 years old) and of middle to low income (£20,000 or less per year per person). In addition, 30% of respondents were male and 66% were female, a figure that corresponds to the actual gender division found in many LETS schemes [46–49]. Moreover, given the profile of respondents, answers can be expected to be well informed since 54% of the people interviewed were organisers of LETS and 76% had been involved with the schemes for more than two years. Nevertheless, findings are used only as light evidence and conclusions are made only when supported with evidence from other studies.

5. Results and findings

5.1. Results on the social aspects of sustainability

The social capital promoted in LETS seems to encourage more collective activities, sharing, and social visions, as well as the fulfilment of many needs of social nature which are often neglected in many other sustainable business initiatives. According to the survey, the factors motivating people to get involved in LETS reflect a will to get engaged in social activities, practical work, and environmental action. Community building was the most popular motivation, followed by 'convenience' and 'environmental reasons' (refer to Table 1). Thus

² LETSLink UK estimates that there are 450 existing groups with about 40,000 participants, however other studies such as that done by Williams [45] identified only 303 schemes and about 21,800 members.

Table 1
Motivations for joining LETS

Motivations	Respondents who mentioned motivation ^a	
	No.	%
Community building	36	72
Convenience	21	42
Environmental reasons	21	42
Socialising	19	38
Economic reasons	17	34
Desire to change lifestyle	14	28
Develop skills/ideas	12	24
Other	9	18
Political reasons	4	8
Learning from others	3	6

^a Respondents could give up to three answers for their motivations. The first number is the amount of times the answer was mentioned and the second is the percentage of respondents who gave that answer.

there seem to be social and environmental concerns in these communities being addressed through LETS systems of consumption.

Overall, LETS programmes seem to be developing the social and community consciousness they are striving for. Participants identified a number of arising social activities as a result of LETS (refer to Fig. 1). The most cited one was ‘increased gatherings and community events’, noticed by a large majority of respondents (86%), this was followed by ‘increased community awareness’, and by ‘friendlier atmosphere’ and ‘increased identification with the locality’. The improvements in social life that emerge in LETS can improve well-being and may fulfil social needs that are being sought in the commercial sphere.

The existence of initiatives promoting collective consumption initiatives was tested by asking individuals what percentage of transactions they thought involved leasing, sharing, and/or pooling of goods and services. From respondents’ perception there seems to be substantial consumption activities of this nature, as it can be derived from Table 2, about 40% of respondents thought they happened in more than 20% of LETS transactions.

In addition, respondents were asked in an open-ended question if they had perceived more collective action and consumption as an outcome of LETS. Many participants (about 40%) identified the existence of these kinds of initiatives and gave some examples such as ‘sharing systems of garden tools’, ‘work in garden allotments’, ‘decorating equipment leasing’, ‘video sharing’, ‘car pooling’, and other rotator, loan, and hire projects. These collective consumption projects are of the kind envisioned in PSS and in the LETS case they are emerging from communities.

Community cohesiveness and action seem quite strong in LETS groups. Seventy-five percent of members reported being involved in other community groups and/or events and in most cases they joined them after being involved in LETS. These results suggest high levels of social capital and viable opportunities to improve the collective life of LETS members.

In relation to environmental goals, there seems to be a positive effect from enhanced social interaction on the diffusion

of environmental awareness. Most programmes have been led by people with a high sensitivity for environmental issues [43,45,51]. In turn, environmental awareness gets transmitted and augmented when the different participants interact and the probabilities of adopting overarching environmental goals increase. In the survey, 52% of respondents had increased their environmental awareness to some extent through LETS. For 44% there had been no change, in many cases (45%) because they had already been environmentally sensitive. Hence, there has also been an aggregate increase in environmental attitudes and awareness through LETS programmes and their mechanisms of social interaction and collective thinking.

5.2. Effectiveness of LETS programmes

If LETS were to become exemplary frameworks for sustainability programmes, it would be important to consider their capacity to fulfil needs, their ability to promote innovative ideas and products, the amount of trust in the system, and satisfaction participants are getting through the programmes. These elements determine the potential of new programmes with sustainability goals and, in particular, they indicate the ability to address consumption problems with socially oriented initiatives.

Max-Neef’s categories of needs were used to test the effectiveness of the programmes at fulfilling fundamental human needs.³ Respondents were asked to choose and evaluate the needs that were being addressed through LETS. Fig. 2 shows those needs perceived to be ‘effectively’ or ‘very effectively’ satisfied.

The fulfilled need most identified was that for ‘friendship’, intended to correspond to the need for affection. The examples given for the satiation of this need included the following comments: ‘meeting like-minded people who are environmentally aware’, ‘the benefits of this programme when one feels alienated in society’, and ‘the chance to interact and meet people I would not have met otherwise’. Hence, LETS have provided new outlets of economic activity that operate in a socially stimulating manner.

According to the survey, the second need most satiated was that for ‘participation’ followed by ‘creativity’. Many times the identified satisfiers were fulfilling both needs simultaneously; referring to community events, social clubs, and instructive and engaging workshops. In general, people were rewarded by the active and significant roles they could hold in the programmes. Many of these fulfilled needs could be classified as social and humanistic in nature.

Bottom-up programmes like LETS can also give rise to innovative ideas within the community context. In the survey, 62% of the interviewees perceived that more than 20% of LETS transactions were ‘innovative ideas, offering new concepts of products and services’. Examples included artwork and health services, helping the disadvantaged, repair work,

³ Needs were listed and in some cases rephrased to be easily understood in the context of what LETS programmes could provide.

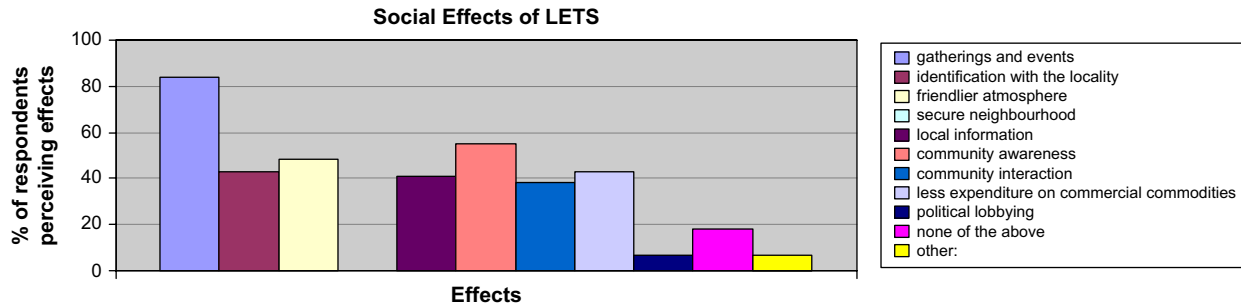


Fig. 1. Social effects as perceived by respondents. *Histograms are ordered from left to right corresponding to the descending order of the legend (“gatherings and events” being the first column on the left and “other” being the last column on the right).

Internet services, and house-chore help. As was mentioned by a respondent, many of these activities would not be economically viable in the market but are still needed by people. Moreover they tend to be of low material intensity and high social consciousness. However, the lack of practical skills and wide-reaching communication were perceived to be limitations.

Another advantage of LETS was perceived as the level of trust that exists in the system. Several respondents found it an asset to know each other personally in order to make exchange relations more solid, fair, and reliable. Fifty-two percent of respondents thought that trust existed in the form of ‘internalised norms and moral obligations’, suggesting a deep-rooted adherence to group obligations and rules that allow the system to function. In order to measure the overall satisfaction of participants with the programmes, people were asked how successful LETS schemes had been in achieving their stated goals. Sixteen percent thought their scheme had been ‘very successful’, 28% thought ‘generally successful’, and 32% thought it had been ‘somewhat successful’. In general, people seemed pleased with the development and outcomes of their schemes and had found it a rewarding experience to participate in LETS. The main areas of problems were related to the need to have a hard working core group and committed leaders to make LETS flourish.

Overall, the survey gave some interesting findings related to the arguments being raised in this paper. The existence of social capital seems to have been a positive factor on the perceived well-being of people and on their commitment to social and environmental issues. In addition, LETS systems appear to be empowering people by improving their skills and capacity to generate ideas and act collectively, all of which are important aspects for sustainable consumption initiatives.

Table 2
Collective consumption in LETS

LETS transactions estimated to involve leasing, sharing, and/or pooling of resources (%)	% of respondents estimating each range
60–80	6
40–60	14
20–40	20
Less than 20	58

5.3. Findings from other studies on LETS

5.3.1. Social networks and environmental concerns

Many other studies carried out on different aspects of LETS support findings related to the effects of greater social interaction on consumption patterns. Given some of the limitations of the survey, it is important to compare this research project to other more elaborate studies on LETS. Most studies show a general consensus that LETS programmes are effective at community building and at creating new social networks [43,45,46,47,52]. In some cases, these effects have led to more community ownership [48] and to better integration of economic and social goals [46]. Overall, participants have felt a reappearance of local networks [49] and a disposition for mutual aid programmes [46]. These characteristics have made LETS successful at re-embedding exchange relations in the social sphere and have brought more attention to the collective experience [52].

In relation to sustainable consumption, a number of attributes related to LETS systems have also been identified [43]. First, LETS get community members interacting more, evaluating their needs, and co-ordinating their abilities and access to resources. They encourage sharing, leasing, and pooling of resources as well as more collective thinking. There are many programmes of tool and big-equipment leasing, laundry-machine sharing [53], car and transport servicing, and collective workshops. Furthermore, they help to finance labour-intensive activities such as service, maintenance, and repair work [44] and promote recycling and reusing practices [43].

They encourage the localisation of the economy [43], giving incentives to identify local resources in culturally and physically appropriate ways [44], decrease transportation pollution and costs, and change consumption patterns [49]. They promote and develop new skills and self-reliance and are thus effective at meeting many needs of humanistic and social nature that are not always fulfilled in the mainstream economy. For instance, they satisfy the need for productive activity, work engagement [46], and social interaction.

A study conducted by Mochiba in 1998, on the ability of LETS to promote sustainable consumption patterns concluded that the programmes’ potential to promote a sustainable

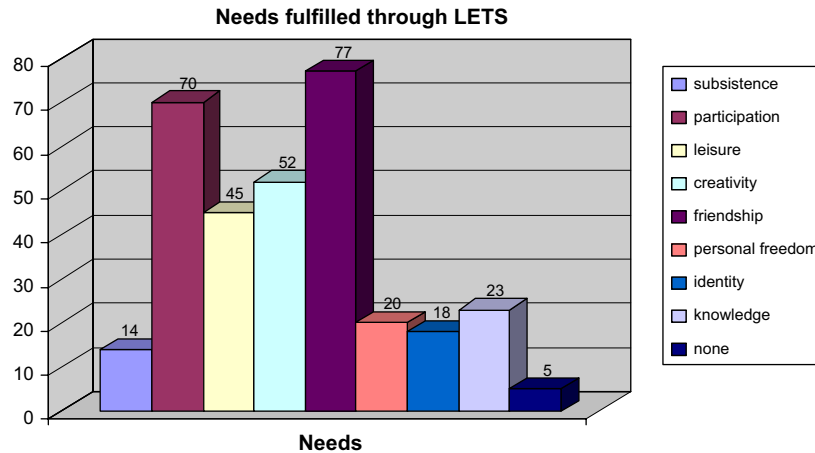


Fig. 2. Percent of respondents identifying needs effectively fulfilled through LETS. *Histograms are ordered from left to right corresponding to the descending order of the legend (“subsistence” being the first column on the left and “none” being the last column on the right).

economy has not been fully realised given that their focus on social issues and community building has not been matched with an equal focus on environmental goals and changing consumption patterns [43]. However, evidence suggests that the focus on social and participatory processes can be an aid to the gradual adoption of more environmental goals. Many participants already have radical environmental ideologies [43], which over time get diffused and integrated into the dynamics of the system. Results from a survey conducted in Kwin⁴ LETS shows the existing and expanding environmental awareness in the group. Ninety-one percent of the respondents in the Kwin’s survey agreed with the fact that development should involve less consumption but greater quality of life, 77% felt that LETS was a greener economy than the mainstream economy, 40% felt their quality of life had increased with LETS, and 31% felt more able to live a greener lifestyle. Moreover the Kwin LETS survey revealed that for some members, the desire to reduce material consumption and waste were key goals that had gotten diffused and had influenced many other members in the scheme. Finally, 23% of respondents claimed to have become more environmentally aware of their localities through LETS [43].

Therefore, the creation of green social networks has been a significant factor strengthening the environmental dimensions of LETS. In many instances, the programmes have instigated changes in consumption patterns as a result of the concerns and actions of some individuals [43,49]. In the Kwin LETS the largest categories of trading by value were on locally supplied services and on repairs and property maintenance. In addition, 45% of members bought recycled or second-hand equipment from within the scheme, 25% directly reduced consumption, and 37% of traders got property repairs. In a different study carried out in Totnes LETS, maintenance and repair work was found to be the third largest good or service bought (consumed by 31% of members). The studies

found that a large portion of these activities would not have happened outside LETS [43].

5.3.2. Limitations of LETS

In spite of the great potential of LETS, there have been a number of problems related to co-ordination inefficiencies and to insufficient participation in the schemes. In many studies, there has been a reported dissatisfaction with the goods and services supplied. For instance, well over half of respondents to a survey conducted by Williams [54] felt their requests were not being met in time and the range of goods and services in offer did not match their needs. In particular, there is a perception that practical skills and goods are lacking and that administration and leadership for the schemes is weak [51]. Moreover, businesses have found it difficult to work with the radically different value-systems and informal organisation of LETS systems and hence their involvement has been minimal⁵ [43,54]. Therefore, LETS programmes have not been able to provide real alternatives for many consumption necessities.

It has been a challenge for participants to understand the dynamics and get actively involved. Many LETS felt affected by noticeable periods of inactivity and an unequal participation rate among members [43,51]. It was pointed out that organisers and administrators, who are always volunteers, tend to be over-strained with work and duties [51]. Many times, programmes have not been able to sustain themselves due to the lack of a critical mass of participants [47]. Some obstacles for wider participation relate to the existence of social capital itself, as sometimes very cohesive groups can be exclusive of outsiders [14]. Many LETS programmes have remained small in scale and self-contained within class divisions and ideologically similar individuals [43,45]. Other identified causes for the lack of participation and co-ordination relate to wider

⁵ The few businesses that have joined, at least in the rural regions, have tended to provide more consumer goods and fewer services [54], not integrating collective consumption schemes of the kind advocated for in PSS.

⁴ Kwin stands for King’s Lynn and West Norfolk LETS.

social issues. On one hand, many participants remain inactive because they have gotten used to feeling disempowered and hence lack the confidence, independence, and energy to get engaged [45]. Furthermore, practical reasons, like the lack of skills, knowledge, and time keep people from participating and getting involved in LETS. At the same time, problems of efficiency and administrative efficacy relate to the lack of well-defined incentives and reward mechanisms as well as to incompatibilities of LETS programmes with the mainstream economy. The limited reach and appeal of the programmes are significant obstacles to overcome. For the time being, LETS can be seen as complementary systems of consumption whose effectiveness depends on the wider social context and groups of people involved.

6. Discussion

6.1. Integrating social strategies

The case study of LETS as PSS programmes illustrates how different approaches to human needs and to the social dynamics behind consumption patterns can influence the move towards sustainable consumption. Innovative and efficient consumption systems that correspond to the many dimensions of our needs can decrease the material intensity of our societies while improving well-being. These new sustainable consumption frameworks must overcome both the flaws of socially disengaged programmes and the challenges of running community initiatives like LETS.

So far, the experience of most PSS programmes shows an ambiguous regard for social and humanistic dimensions in spite of numerous recommendations to include the social context of consumption when designing the programmes [20,55,56]. This failure has limited the success of PSS in transforming consumption patterns. By focusing only on increasing the responsibilities of producers, many initiatives have remained only isolated solutions, modifying the channels of service provision rather than offering holistic programmes working at the system-level.

In many cases, PSS have been framed as consumption modes of immediate satisfaction and little consumer involvement; characteristics that forewarn a drive for increasing consumption from instant and easy rewards and a growing incompetence of consumers to use skills and other modes of satisfaction [10,29]. Giving more responsibilities to suppliers to control consumption processes can make consumers more dependent on producers and less capable to engage in self-satisfaction, as the needs theory demonstrates. The outcome is a loss of consumer autonomy, which according to some surveys, “results in consumers feeling even more unsatisfied and therefore seek[ing] more consumption to fill the hole” [29]. For instance, the Interface Evergreen Lease Programme was not able to get consumer commitment due to a lack of consumer involvement and understanding of the environmental goals (Interface, personal communication, August 2003). Services like food delivery systems can also make consumers increasingly disengaged from the food-making process,

potentially increasing aggregate consumption through in-process needs left unsatisfied as well as time and savings rebound effects. The same pattern can be seen with many other PSS programmes.

More socially oriented programmes seem better able to overcome many of these limitations. The LETS case study showed an increase in collective visions and community involvement (own survey, and [45,46,48]). In many occasions, consumers also felt empowered with increased agency in their economic systems (own survey, and [53]). Moreover, as suggested by the results of our survey, the schemes can address some of the most often neglected needs in mainstream programmes such as the need for participation, creativity, autonomy, and friendship. Given the social and humanistic voids motivating much consumption, these aspects of socially oriented PSS could be effective ways to improve well-being and possibly reduce the consumption of ineffective market satisfiers for social and humanistic needs.

Nevertheless, integrating more social components is not an easy task. Programmes like LETS have suffered from a lack of compatibility with the mainstream economy. In many cases they have been unable to reach critical mass points and include different sections of society. Moreover, social factors are not equally effective on different consumer types, activities, and/or circumstances; therefore other factors and motivations still play key roles in the development of sustainable consumption programmes.

The limitations of LETS suggest that formal structures and appropriate economic mechanisms are also crucial factors for the implementation of sustainability programmes. These formal aspects enhance the efficiency of management, the marketing of the programmes, and the compatibility of the systems with the wider socio-economic system. Studies have found that better management and administrative support could make LETS more far-reaching [43]. While social and environmental objectives legitimise sustainable consumption programmes, economic efficiency and incentive mechanisms will allow the programmes to become viable alternative options.

6.2. New frameworks

Programmes like PSS benefit from an underlying structure that can easily integrate stronger social considerations and processes. The conceptual framework and goals of PSS are based on principles of collective consumption, tighter economic relations, and more efficient administration of economic processes, all of which are dependent on social factors. At the same time, some of the main barriers that the programmes have faced relate to their neglect of social issues; these include the focus on the individual over the social context, the lack of social activities, and the decreased habit of collective consumption [5]. Therefore the inclusion of social processes may offer a way to improve the performance of many PSS.

Some PSS-style programmes have already been integrating clear social components as part of their sustainability efforts.

Examples include common kitchens, neighbourhood laundries, food cooperatives, and other living-space community services [20,29,57]. Many of these initiatives operate like LETS, with strong social dimensions, more sharing schemes, and highly participatory decision-making. The specific frameworks differ somewhat from initiative to initiative but the focus on social priorities has consistently resulted in high levels of social satisfaction and innovative arrangements.

The overall success of more socially oriented PSS frameworks depends on the ability to make the programmes more widespread, viable, and ecologically well informed. To implement collective consumption schemes, the whole consumption system will have to be reviewed; including the design of artefacts, institutional contexts and infrastructure, and consumers' practices-in-use [29]. There needs to be dialogue and cooperation among the different actors involved and stages of the consumption process. PSS programmes already work at the system level through their advocacy for closer consumer-producer relations, more personal interaction and by increasing consumer involvement in the provision of the service. The active participation of all actors can help the programmes get diffused, adopted, and internalised on a large scale. Therefore socially oriented PSS programmes play a complementary and important role in the sustainable consumption movement.

7. Conclusions

The disembodiedness of economies from the social world is having great impact on consumption problems. The growing separation between producers and consumers, the lack of social satisfiers, and the compromising of social welfare to economic performance have been major obstacles for achieving sustainability goals. There have been limited means for consumers to make socially optimal decisions in the provision systems of consumer goods. Relying on choice in the purchase of commodities as the dominant medium of influencing economic systems [34] can be inappropriate for many complex social decisions [17]. Consumption solutions require economic activity to be openly democratic, actively participative, and reflective of its goals in order to integrate social values, concerns, and needs.

However, the issue of collective choice has become more and more problematic. Environmental resources as public goods are being unequally and unsustainably appropriated as a result of social pressures and market failures for handling scarcity, long-term valuation [8,38], and efficient need fulfilment. Many cases of unsustainable consumption have been the result of our inability to envision our needs and goals as ultimately social and to the lack of participatory and co-ordinated processes guiding a collectively constructed vision of a sustainable future [56]. Ingrained attitudes and behaviour tending towards individualism and material ownership have limited concepts like PSS that are based on collective consumption and service provision. Hence, the programmes have to develop a consumption system that goes beyond utility

and includes the crucial social and psychological functions of consumption.

By taking more holistic approaches and framing consumption problems at the system level, programmes like PSS will be more effective at containing our environmental impact in a solid and long-lasting way. Sustainable consumption traps like the persistence of insatiable needs as well as rebound effects can be avoided if social culture, attitudes, and behaviour are targeted. Moreover if PSS are able to bring together community, government, and business; more locally acceptable and co-ordinated solutions can be developed. For businesses, it can increase opportunities and give a competitive advantage through the creation of key networks and efficient satisfiers. For consumers/citizens/workers, more participatory initiatives can increase their market knowledge, their corresponding responsibilities [58,59], and the satisfaction extracted from different stages of the consumption process.

In this paper, we highlighted the advantages of working together and building new shared norms, attitudes, and social frameworks for a transition to more sustainable consumption patterns. Product Service Systems offer a valuable vision and concept for the future of sustainable consumption patterns. LETS programmes are an example of how PSS can increase social capital and integrate more participatory strategies. Therefore, sustainable consumption programmes must reformulate their strategies and begin to integrate more actively the social, environmental and economic pillars of sustainability.

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