
Sustainable behaviour at work and in private life: the contribution of enterprises

**Manfred Klade*, Wilma Mert and
Ulrike Seebacher**

Inter-University Research Centre IFZ,
Schloegelgasse 2, 8010 Graz, Austria
Email: office@tb-klade.at
Email: wilma.mert@siemens.com
Email: ulrike.seebacher@uni-graz.at
*Corresponding author

Irmgard Schultz

Institute for Socio-Ecological Research ISOE,
Hamburger Allee 45,
D-60486 Frankfurt am Main, Germany
Email: schultz@isoe.at

Abstract: The overall issue of the research presented is to use the workplace for achieving a more sustainable and climate aware behaviour of employees. Research on sustainable consumption indicate that the workplace is a suitable setting to organise daily practices and behavioural routines in a more sustainable and climate friendly manner. An integrated view has been taken in concrete company settings. It brought a first understanding about sustainable provisions offered by companies, mutual learning about sustainability issues at work and spillover into private life. So far companies have predominantly engaged in reducing emissions in their production and service processes. This project aims at raising awareness of companies regarding their contribution towards green transition by motivating their employees. Although scientific research has fairly underpinned the importance of the work-place as context for behavioural change, this is one of the first empirical works to prove the theoretical concept.

Keywords: companies; employees; workplace; green transition; proactive environmental strategies; sustainable behaviour; sustainable lifestyles; corporate social responsibility; sustainability strategies.

Reference to this paper should be made as follows: Klade, M., Mert, W., Seebacher, U. and Schultz, I. (2013) 'Sustainable behaviour at work and in private life: the contribution of enterprises', *Int. J. Innovation and Sustainable Development*, Vol. 7, No. 4, pp. 321–332.

Biographical notes: Manfred Klade operates a bureau for civil engineering. From 1999 to 2012 he was employed by the Interuniversity Research Centre IFZ in Austria. He received his PhD in Chemistry and graduated in environmental engineering. His research subjects and consulting activities are sustainable lifestyles, product assessment and policy advice in terms of sustainability and new technologies.

Ulrike Seebacher is active in research projects and consulting activities in the area of sustainable consumption and production, corporate social sustainability (CSR) and sustainable lifestyles. She received her PhD in Technical Chemistry and graduated as a 'Master of Science in Organisation Development' from the University Klagenfurt.

Wilma Mert studied Psychology from the Karl-Franzens-University at Graz and from the University of Kent at Canterbury, with main focus on Social and Applied Psychology. An emphasis of her work is sustainable lifestyle and sustainable communication.

Irmgard Schultz is a Co-founder of ISOE and Member of the executive board. She is part of the research unit Energy and Climate Protection in Everyday Life. She has studied political science, philosophy and literary criticism from Goethe University, Frankfurt am Main and received her Doctorate there in 1992.

1 Introduction

This paper opens up a new perspective on the workplace as a place for learning, the employees as a new target group for interventions and on deliberate incentives given by the company. The overall issue of the research presented is to use the workplace for achieving a more sustainable and climate conscious behaviour of employees. The portfolio of interventions includes rewarding measures and provisions on the part of the company. The workplace setting together with incentives provided by the company forms an ideal opportunity to organise daily practices and behavioural routines in a more sustainable and climate friendly manner. This has been underpinned by theoretical concepts to a fair extent, but empirical work is largely lacking. In particular there is a substantial need to test strategies of how interventions can be implemented without provoking counter reactions and how employees and companies can be involved effectively. There is also a need to develop a system for monitoring and assessing the effects of such interventions. In a nutshell, this paper explores how companies can contribute to encouraging sustainable practices and preventing unsustainable behaviour in an efficient and measurable way. The research project 'Sustainable behaviour at work and in private life' seeks to bridge this empirical gap for the first time. The concept and outcomes of the project thus form an essential part of the content.

2 How can sustainable consumption be put into practice?

Mobility, food, home-building and energy-using products are responsible for 70–80% of the lifecycle environmental impacts in industrialised countries (Tukker et al., 2010). Although it is widely accepted that the dominant consumption patterns in affluent countries need to be substantially reduced, there is an ongoing debate on how this can be achieved in practice (e.g., Spaargaren, 2003; Southerton et al., 2004; Tukker et al., 2010). Two pivotal starting points can be named in this context. The first one considers the eco-efficient maintenance of products and services including eco-efficiency in production. Eco-efficiency means less input or throughput in the production and

maintenance of goods and services. This approach is accompanied by management tools, labelling schemes, green procurement and eco-taxes (e.g., OECD, 2008). Critics argue however, that eco-efficiency alone is not sufficient and that the business sector itself needs to show stronger commitment to a culture congruent with the values of sustainability (Michaelis, 2002). Relating to restructuring, cost-cutting and downsizing of organisations, Wilkinson (2005) warns that many companies see their employees only as costs to be cut rather than as assets to be developed. This argument is in line with Michaelis, for whom insecurity of employment, competitive structures and increased control are notable drivers behind consumerism. An argument supporting the need for a different approach is the rebound effect. Improvements in efficiency make goods and services cheaper, so consumers can buy more of them. This behavioural response offsets measures taken to reduce environmental impacts (Hertwich, 2005). So eco-efficiency is counteracted by our modes of consumption. Consequently the second starting point concerns consumption and behaviour. Proposed strategies to reduce this impact depend on the corresponding models of consumer behaviour. The criteria for these models are diverse and the influential factors on behaviour and behavioural changes are differently valued (Jackson, 2005). They include, amongst others, the role of models, the autonomy and rationality of choice, the relevance of values, moral and normative conduct, the matter of habit, social influences and structural factors. Classic economics defines consumption primarily as an individual choice to optimise one's benefit. But consumers' choices are limited by structural factors such as working life conditions, urban structure and everyday life patterns (Sanne, 2002) and characterised by a complex causal relationship between prompted pro-environmental attitudes and real behaviour in everyday practice (Thøgersen, 2004). For Jackson (2005), affective motivations conflict with moral concerns, social norms interfere with individual preference and situational conditions with intention. Choice is thus not a straightforward process of individual rational deliberation, but moderated by external situational factors. The embeddedness of the individual in a social group appears to have a vital influence on consumer behaviour. This can be seen as a reason why campaigns promoting pro-environmental behaviour of individuals only produce marginal effects. The analytical questions pertaining to how household consumption translates into environmental impact have now attained a level of maturity and the question of how interventions can reduce environmental impacts is becoming more urgent (Tukker et al., 2010).

3 The workplace as a setting for practicing sustainable and pro-environmental behaviour

The relatively new topic of pro-environmental behaviour in the workplace has already been investigated. A profound and well-documented investigation conducted by Hargreaves (2008) and Nye and Hargreaves (2010) will be illustrated as a reference: Hargreaves et al. build on the body of research which shows that the attitude-behaviour association is modulated by *context*. For them, context is not a pre-existing external input, but constructed and defined through interaction and then translated into action in different settings. They analyse the social dynamics and behavioural outcomes of team-based behaviour change interventions at the workplace in the UK. Environment Champions is a structured behaviour change programme, which gathers together groups of individuals for facilitated discussions about environmental problems and action (i.e. a

communication campaign focusing on energy and recycling). Following this approach, a construction company achieved a 29% decrease in waste sent to landfill and 5.4% decrease in electricity usage. Semi-structured interviews both with Environment Champions and their colleagues led to the conclusion that benchmarking (*interviewee: if you can't measure and monitor, you can't manage...*) is strongly requested by the participants.

If the workplace is a suitable place for people to learn to change their environmental behaviour, then the next question would be how interventions there affect overall consumption patterns. It can be asserted that theoretical concepts and empirical work required to answer this question are scarce, a circumstance that is criticised by several researchers. For Røpke (2004), consumption in the home domain has been extensively elucidated by theoretical work, but widely disregarded in its relation to the workplace. In his case study Hargreaves (2008) also emphasises the over-focus on domestic and private settings within research on pro-environmental behaviour. Findings cited by Røpke (2004) can be interpreted as a negative spillover from work to private life. For instance, employees reported having got used to conveniences first experienced at the workplace such as air conditioning in company cars, microwave ovens in workplace kitchens, mobile phones and computer equipment, new food items in the canteen and so on.

The fact that employees and consumers are one and the same and that the roles of consumers and employees are interrelated was further highlighted by Jackson in his review on sustainable consumption (Jackson, 2006). He sees enough evidence that behaving in certain ways in one context can have a knock-on effect in another life domain. Business practices thus form a unique opportunity to influence and support domestic behaviour: *The failure to encourage pro-environmental behaviours at work can significantly reduce the incentive for consumers to act responsibly at home* (Jackson, 2006, p.131).

Theoretical research has only recently suggested that interventions at the workplace could be used to promote pro-environmental behaviour and consequently stimulate more sustainable consumption. Muster and Schrader (2009, 2011) conceptualise a new role for companies in what they term 'green human resource management'. Corporate training of employees neglects their private environmental performance and consumption patterns. Instead, they propose a model for a green work-life-balance. It is common practice in companies to offer incentives and rewards to employees for different reasons: to enhance commitment, strengthen their loyalty or improve the image of the firm. Could such offers, they argue, also stimulate overall environmental behaviour? Muster (2011) sees the workplace as an important setting for socialisation and formal education. Like schools or universities, workplaces are determinants of daily routines and prescribe peer groups. Companies have not yet supported sustainable consumption patterns of their employees, however, as they do not recognise them in their role as consumers. Muster suggests that incentive systems can also be used in conjunction with activities for promoting sustainable consumption. Companies which already consider sustainability issues for internal processes and their stakeholders could extend activities for consumption issues at home and thus complement already existing internal CSR activities. A wide range of interventions is theoretically available to make employees' private consumption patterns more sustainable: influencing mobility behaviour or eating habits or enhancing employees' knowledge, capability and motivation to consume differently.

4 The research project 'sustainable behaviour at work and in private life'

Sustainable consumption research has started to recognise the junction between workplace and private life, as employees and consumers are one and the same (Røpke, 2004; Jackson, 2006; Muster, 2011). This new perspective has been worked out in the previous chapters. It now opens up an opportunity to organise daily practices and behavioural routines in a more sustainable and climate friendly manner. While it has been underpinned by recent theoretical work to a fair extent, empirical work is largely lacking. The project 'sustainable behaviour at work and in private life', carried out from 2008 to 2011 in collaboration with Austrian companies, so far constitutes a rare reference for research on this issue.

The starting point was an integrated understanding of consumers in their different roles. It is substantially congruent with the approach coincidentally developed by Muster and Schrader. Beyond that, the project builds on the everyday life approach in consumer research (e.g., Røpke, 2001; Jackson, 2006; Schultz and Stieess, 2008; Klade et al., 2010; Schultz and Seebacher, 2010).

The work focuses on the companies' voluntary measures and incentives provided to their employees. As Muster (2011) stresses, incentives and rewards are given to enhance commitment, strengthen loyalty etc. From a pro-environmental perspective however, it would appear to be a conclusive approach to utilise such incentives as vehicles for intervention. Companies' provisions can therefore be also understood as an infrastructural supply system which augments or constrains sustainable behaviour. The research questions were:

- Which types of provisions cohere with sustainable behaviour?
- Which types of sustainable provisions do employees appreciate or adopt?
- Which types of sustainable provisions offer high potential for win-win situations for employers?
- Do experiences and routines gained at the workplace carry over into private life (i.e. create a 'spillover')?

Sustainable behaviour is based on the concurrence of different factors and limiting conditions. The research tried to capture the complexity of these factors in an appropriate definition which is congruent with those given by the Austrian Strategy for Sustainable Development (ASDS, 2002) and CSR reporting schemes (OECD, 2006): *A sustainable behaviour is ecologically and socially sound in respect to diet, mobility behaviour and physical training. It thus contributes to the conservation of the environment, enhances social quality and individual wellbeing. It is suitable for daily routines, practicable in the long-term, and economically and institutionally rooted.* Thus environment as well as socially benign effects and the individual well-being were considered as being equally important.

5 Empirical work

The first step consisted in generating an inventory of good practices out of a sample of 40 companies. The selection criteria included outstanding activity in CSR, workplace

health promotion, nutrition or mobility management. In a second step ten companies of this sample were examined more closely. Finally, four were selected for an in-depth analysis. The companies chosen for this third step were a wholesale company (40 employees, all of them women), a production company (120 employees), a university (approx. 2200 employees) and an international corporation (approx. 7000 employees, analysis was limited to a production site in Austria).

5.1 Provisions and effects on behaviour

The inventory of good practices gave an overview of the incentives and rewards offered by committed companies. Inclusion depended on compliance with the sustainable behaviour definition given above. This inventory was then examined by means of semi-quantitative interviews (Step 2) and focus groups (Step 3). The question of what type of provisions employees appreciate and adopt was analysed via focus groups. An opinion poll was tested in one company for monitoring reasons.

Provisions were clustered into the categories: *Physical Exercise and (Mental) Health, Nutrition, Mobility, Gender and Work-Life Balance, Education of Trainees* for the inventory of good practices. According to the literature *Mobility* and *Nutrition* have high environmental impacts (Tukker et al., 2010), while the categories *Physical Exercise and (Mental) Health, Gender and Work-Life Balance* and *Education of Trainees* seem to have only a social impact. But this divide is too short sighted and does not reflect everyday life. The study intended to understand consumers in their different roles, which may be ‘lived’ simultaneously. For instance, taking children to the kindergarten may cause a negative impact in terms of CO₂ emissions if a car is used for this purpose. Vice versa, cycling to work may originally be intended to improve health and fitness, but at the same time improves the cyclist’s CO₂ balance. The following sections summarise the findings of the closer examination of the ten companies (Step 2) and the in-depth analysis (Step 3), employee feed-back on attractiveness and observed spillover effects for the fields of nutrition, mobility and health.

5.1.1 Nutrition

The provisions revealed by the inventory of good practices are: canteens, optionally with organic and regional ingredients; take-away food; counselling offers (personal advice); cooking classes; free beverages and fruit; campaigns (e.g., organic week). Almost all of the companies in Step 2 emphasise provisions of nutrition. Canteens were limited to bigger companies, while the smaller companies tried to compensate for this by making alternative offers. All companies in the in-depth analysis provided ‘fruit baskets’ and ‘health corners’ replete with fruit and snacks. The focus groups indicated a very positive reception and self-reported spillover effects between colleagues. This strongly supports the hypothesis that *observing how others behave provides promising avenues for changing behaviour*. The same was true with more elaborated provisions such as cooking classes and nutrition counselling, for which a spillover effect at home and in the family was observed. Activities supporting testing and training of (new) routines need to be embedded in a suitable framework, which may include the provision of rooms, catering of good quality, financial subsidies, organisational responsibilities to refill the fruit basket, information and feedback possibilities.

5.1.2 *Mobility*

The provisions in this field included: promoting cycling (cycle shelters, showers, repair service); promoting public transport (ticket subsidy); promoting car pooling; optimising transport fleet; campaigns (eco-friendly driving, bike and business); video conferences. This field of action was found to be of minor importance for companies in rural areas. Public transport in rural areas is often inflexible or still lacking. The focus group participants in rural areas talked less willingly about their mobility and emphasised the barriers to environmentally friendly mobility. Ride sharing was usually organised on private initiative. Due to the lack of parking space one company in an urban area decided to subsidise employees' tickets for public transport and to increase the fee for parking spaces on the company premises. Focus group members observed a change of routines since many of them changed from private cars to public transport and began to talk about the advantages. A spillover into private life was reported because tickets were also used for private purposes, and were handed out to other family members or neighbours at weekends.

5.1.3 *Health*

Health promotion was adopted since it refers to well-being, which again is part of the *sustainable behaviour* definition given. The project opens a new perspective in this context: while companies tend to perceive health promotion from an economic point of view (fewer cases of illness, enhancing productivity), the environmental consequences of health related activities should be further considered. The inventory revealed the following provisions: sport infrastructure (gym equipment and rooms); sport events; campaigns; counselling; services (massage); workshops and seminars (stop-smoking); classes (yoga, qigong, gym); preventive health care (vaccination, eye testing); mental and psychological advice (stress and burn-out prevention).

All the companies interviewed in Step 2 organised non-smoking seminars and vaccinations, while personal support (e.g., fitness instruction, ergonomic and spine tutorials, and chair massage) and appropriate infrastructure (e.g., climbing wall, massage couch, etc.) were offered by only a few. The demand for physical exercise opportunities differs. An interesting example of a low-barrier provision was also found: participants could accumulate 'moving time' – the type of movement was free of choice – in 'time equivalent' lists managed by the company. The best 'mover' (the person with the highest amount of moving minutes) was awarded a prize at the end of the year. Since the type of 'movement' was not predefined this makes the provision attractive to all.

5.2 *Provisions with win-win potentials*

From the companies' perspective sustainability itself is not a motive for engagement. It is more relevant for companies to make their societal engagement visible. However, the interviews suggest that benchmarking in CSR or competing for awards is a consequence of and not a motive for engagement. Focus group outcomes show that companies cannot overestimate the relevance of their in-house image. Employees appreciate a sensitive response to their needs and want to take pride in their company.

5.2.1 *The attractiveness of multi-motivational or low-barrier provisions*

Two of the provisions investigated are deemed to be outstanding: first, a company-owned kindergarten which provides healthy nutrition for children as well as for all employed parents. The second example is a measure termed ‘moving for a good purpose’ which integrates health, environmental protection and charity in a creative way. It is a highly integrative (competing with peers), low-barrier (related to physical activity) and highly convenient (related to time independency) provision which additionally generates solidarity and is ethically appealing (charity). Both cases integrate several benefits in one single measure and reach a high degree of attendance and employee satisfaction. This supports the hypothesis that provisions are the more effective and attractive, the more they take into account everyday life experience and the lower the barriers to participation are.

5.2.2 *Integrating environmental aspects into workplace health promotion*

Environmental effects have so far not been recognised in health related provisions. However, health promotion may provide a good starting point for integrating environmental aspects into work-related health measures (Cunningham et al., 2010). Expanding the example of nutritional advice to the environmental relevance of food, fruit bowls may be filled from the company’s own fruit plantations, garden patches could be cultivated or employees may offer food from their own gardens at the workplace. An example for mobility has already been mentioned: cycling to work for health reasons may also cause CO₂ savings. ‘Sustainability Workshops’ were held to explore how the integration of health and environmental issues corresponds to employee expectations. The workshops offered an opportunity to elaborate fictitious examples of provisions. The task of the participants was to select examples out of a list of templates and create an optimal design both for them and their company, while the project supervised and documented the process. The participants found it attractive and easy to adapt the templates. This procedure has a twofold benefit: it gives insight into the employees’ preferences in respect to the provisions and utilises the creative potential of the persons affected to optimise them. It is thought that existing structures of workplace health promotion may benefit from such a process.

Table 1 List of templates provided to the workshop participants (most often selected activities)

| <i>Activity</i> | <i>Short description</i> |
|--|--|
| Kindergarten organic food | The company-owned kindergarten offers both healthy and environmentally friendly meals and snacks for children and employees. Information on healthy and ecologically sound child nutrition is provided for interested parents. |
| Eco button | Employees who decide to walk, cycle or use car-pooling to get to their workplace may push an ‘eco button’ next to the time clock to gather an eco bonus of 1 € per day. |
| Integrated consultancy | Environmental and health experts help to create a personal training and mobility plan based on the individual physical and health status and the mobility profile. |
| Integrated health and environment circle | The health circle of the company integrates ecological aspects into the workplace promotion scheme. |

5.3 Routines and spillover

Routines are activities and practices which are not carried out once but are performed repeatedly. It is thought that a steady ‘visibility’ of the provisions is beneficial for developing routines, but this must not be confused with advertising them. Instead, provisions should be cautiously integrated into the working day, and voluntary participation and freedom of choice should be kept in mind to prevent reactive responses. Sustainable provisions correspond to sustainable routines. This was found to be most relevant to nutrition:

“It becomes a habit – you also eat more fruit at home. I always ate fruit, but now I often choose fruit instead of a sausage sandwich in the evening”, “I regularly pass the fruit corner and automatically take a piece of fruit. At home I also choose apples or bananas more often (participant focus group)”.

Participants from the focus groups reported that the provisions raised their awareness with respect to physical exercise and sport in daily life. Employees also said that they use the public transport tickets subsidised by the company for private purposes and even hand them over to family members and neighbours.

It has already been mentioned that altered routines mean altered behaviour. The corresponding research question is: Do experiences and routines gained at the workplace carry over into the private sphere and if yes, can this be proven? Summing up, we state that a spillover effect occurs through the development of new routines. But precisely how does this process take place?

Sustainable provisions provide an impetus and initialise sustainable routines by changing existing routines. Routines do not change all at once however, but the adaptation process takes place in a specific manner. For instance employees try out only one healthy food recipe adopted in the company’s cooking-together events. They may eat just a little bit more fruit due to the newly installed fruit basket in the office kitchen, but of course they will not change their eating habits altogether. Changing routines is a lengthy and complex process and requires constant stimuli. ‘Learning by doing’ in this context means repetition and training. The focus group results indicate that changing of routines is accompanied by emulating and imitating the behaviour of colleagues. Employees may be inspired by fellow employees: *‘It is like a chain reaction: I go and get an apple, the other one does the same’*. This means that employees internalise a breaking of unsustainable habits and adopt alternative behaviour by learning from the examples of their colleagues. Peer-to-peer learning could be one of the most important factors for such adaptations. This empirical result derived from focus group interviews confirms the premise that the *workplace is a place for socialisation and learning* (Muster, 2011). Consequently, designers of provisions should enable or facilitate situations of mutual learning and (sustainable) socialisation. The perspective of learning is connected to the role of consumers as everyday life actors. Consumption research and campaigns for sustainable consumption use the insight of mutual learning in a programmatic way for sustainability changes by postulating ‘We will if you will’.

Another factor for success refers to employees in their role as market actors. Deliberately chosen incentives are subject to the logic of demand and supply like any other offering on the market. Employees apply a kind of market logic in terms of counting the pros and cons when adopting offerings. A visible personal benefit is a strong pro argument. This may be well-being, fun and pleasure or other incentives such as (cheaper) child care facilities. Provisions containing a financial reward are also very

welcome, such as subsidised canteen meals, kindergarten or public transport tickets. Adequate infrastructure with, for instance, easy access to physical exercise is also appreciated. On the other hand, constraints may make participation less attractive and are therefore booked on the list of cons, such as time restrictions due to individual time management or shift work.

This calculation considering individual benefits and lack of convenience reinforces or weakens environmental and ethical motives. Records of the sustainability workshops clearly show that an ecological aspect is more relevant if there is a kind of extra benefit combined with the benefit of fulfilling a practical need. This explains why the provision of organic food for meals in a kindergarten is so attractive. Provisions which offer multiple benefits are the most attractive. These empirical insights imply that the following aspects should be taken into account when planning provisions:

- It is essential to know the different needs, time restrictions and possible fields of conflicts of the employees in a concrete workplace when planning sustainability provisions;
- It is essential to provide a variety of provisions which address different needs of (different) employees;
- It is indispensable to include employees of different social groups into the planning and implementation of provisions because they will contribute their knowledge about different needs and time restrictions and conflicts of interest.

6 Conclusions

Developing concrete recommendations or concepts for provisions requires knowledge on how different target groups may be addressed very specifically. In our research managers/owners, functional officers/health circle members and employees represent those who implement and utilise provisions. Successful implementation requires knowledge about employees both as market actors and as actors in everyday life. This includes knowing about their wishes, interests and 'market' decisions and concurrently their constraints due to work-life imbalances, conflicts or time restrictions. It is also helpful to understand how the provisions offered are used and how mutual learning about sustainability issues at work and in private life can take place. This is why an integrated view has been taken in concrete company settings and why a transformative perspective is relevant to bridge the knowledge-to-action gap in consumer studies and consumer policies. There is a further need to develop an instrument for monitoring and assessing the effects of interventions, for instance as CO₂ savings. The discussion about such an instrument started during the project, but was finally aborted due to methodological difficulties and a lack of time and resources.

Acknowledgements

This contribution is based on the joint work of the project team composed of Wilma Mert, Manfred Klade, Ulrike Seebacher (coordinator) (IFZ), Irmgard Schultz (ISOE),

Monika Bauer (IfGP), Sabine Baumer, Cosima Pilz, Uwe Kozina (UBZ). We would like to thank the participating companies and their employees for allowing us to gain valuable insights concerning the practice of sustainable behaviour at work and in private life.

References

- ASDS (2002) *The Austrian strategy for sustainable development. An initiative of the Federal Government*. Available online at: <http://www.nachhaltigkeit.at/article/archive/26469> (accessed on 8 March 2011).
- Cunningham, T.R. Galloway-Williams, N. and Geller, E.S. (2010) 'Protecting the planet and its people: how do interventions to promote environmental sustainability and occupational safety and health overlap?', *Journal of Safety Research*, Vol. 41, No. 5, pp.407–416.
- Hargreaves, T. (2008) *Making Pro-environmental Behaviour Work: An Ethnographic Study of Practice, Process and Power in the Workplace*, PhD Thesis, University of East Anglia, Norwich, UK.
- Hertwich, E.G. (2005) 'Consumption and the rebound effect: an industrial ecology perspective', *Journal of Industrial Ecology*, Vol. 9, Nos. 1/2, pp.85–98.
- Jackson, T. (2005) 'Living better by consuming less? Is there a "double dividend" in sustainable consumption?', *Journal of Industrial Ecology*, Vol. 9, Nos. 1/2, pp.20–36.
- Jackson, T. (2006) *Motivating sustainable consumption: a review of evidence on consumer behaviour and behavioural change*. Available online at: http://www.sd-research.org.uk/wp-content/uploads/motivatingfinal_000.pdf (accessed on 7 March 2011).
- Klade, M., Mert, M. and Seebacher, U. (2010) 'Sustainable behaviour at work and in private life: the contribution of enterprises', Paper presented at *The GIRA 2010 Conference on Corporate Governance, Innovation, Social and Environmental Responsibility*, 9–10 September, Lisbon, Portugal.
- Michaelis, L. (2002) 'The role of business in sustainable consumption', *Journal of Cleaner Production*, Vol. 11, pp.915–921.
- Muster, V. (2011) 'Companies promoting sustainable consumption of employees', *Journal of Consumer Policy*, Vol. 34, No. 1, pp.161–174.
- Muster, V. and Schrader, U. (2009) 'Förderung des nachhaltigen Konsums von Mitarbeitern', *Ökologisches Wirtschaften*, Vol. 2, pp.12–13.
- Muster, V. and Schrader, U. (2011) 'Green work-life-balance: a new perspective for green human resource management', *German Journal of Research in Human Resource Management*, Vol. 25, No. 2, pp.140–156.
- Nye, M. and Hargreaves, T. (2010) 'Exploring the social dynamics of proenvironmental behaviour change', *Journal of Industrial Ecology*, Vol. 14, No. 1, pp.137–149.
- OECD (2006) *Good practices in the national sustainable development strategies of OECD countries*. Available online at: <http://www.oecd.org/dataoecd/58/42/36655769.pdf> (accessed on 11 September 2011).
- OECD (2008) *Promoting sustainable consumption: good practices in OECD countries*. Available online at: <http://www.oecd.org/dataoecd/1/59/40317373.pdf> (accessed on 8 August 2011).
- Röpke, I. (2001) 'New technology in everyday life – social processes and environmental impact', *Ecological Economics*, Vol. 38, No. 3, pp.403–422.
- Röpke, I. (2004) 'Work-related consumption drivers and consumption at work', in Reisch, L.A. and Röpke, I. (Eds): *The Ecological Economics of Consumption*, Edward Elgar, Cheltenham, UK.
- Sanne, C. (2002) 'Willing consumers—or locked-in? Policies for a sustainable consumption', *Ecological Economics*, Vol. 42, Nos. 1/2, pp.273–287.

- Schultz, I. and Seebacher, U. (2010) 'Sustainable behaviour at work and in private life: preconditions, measures and tools for promoting spillover', Paper presented at The *ERSCP-EMSU Conference Knowledge Collaboration & Learning for Sustainable Innovation*, 25–29 October, Delft, The Netherlands.
- Schultz, I. and Stiess, I. (2008) 'Linking sustainable consumption to everyday life: a social-ecological approach to consumption research', in Tukker, A., Charter, M. and Vezzoli, C. (Eds): *Perspectives on radical Changes to Sustainable Consumption and Production. System Innovation for Sustainability 1*, Greenleaf Publishing, Sheffield, pp.288–300.
- Southerton, D., Warde, A. and Hand, M. (2004) 'The limited autonomy of the consumer: implications for sustainable consumption', in Southerton, D., Chappells, H. and van Vliet, B. (Eds): *Sustainable Consumption: The Implications of Changing Infrastructures of Provision*, Edward Elgar, pp.32–48.
- Spaargaren, G. (2003) 'Sustainable consumption: a theoretical and environmental policy perspective', *Society and Natural Resources*, Vol. 16, pp.687–701.
- Thøgersen, J. (2004) 'A cognitive dissonance interpretation of consistencies and inconsistencies in environmentally responsible behaviour', *Journal of Environmental Psychology*, Vol. 24, No. 1, pp.93–103.
- Tukker, A., Cohen, M.J., Hubacek, K. and Mont, O. (2010) 'The impact of household consumption and options for change', *Journal of Industrial Ecology*, Vol. 14, No. 1, pp.13–30.
- Wilkinson, A. (2005) 'Downsizing, rightsizing or dumbsizing? Quality, human resources and the management of sustainability', *Total Quality Management*, Vol. 16, Nos. 8/9, pp.1079–1088.