The contribution of psychology in connecting the civic and environmental dimensions of sustainability

Giulia Rossi[1], Martin Dodman[2]

[1] Free University of Bozen, Italy
[2] Interdisciplinary Research Institute on Sustainability, Italy

Abstract. This paper examines the role of social sciences, and in particular that of psychology, in analyzing and defining the concept of sustainability and understanding ways of promoting sustainable human attitudes and behaviors. It is argued that there is a crucial interdependence between the civic and environmental dimensions of sustainable communities and that in this respect we need to explore how psychological bridging mechanisms between citizens, their communities and their environments can help build new pathways to individual and planetary wellbeing.

Keywords: psychology, sustainability, civic environmentalism, individuals, communities

Competing Interests: The authors have declared that no competing interests exist.

Corresponding Author: Martin Dodman, Interdisciplinary Research Institute on Sustainability, Via Accademia Albertina 13, 10123 Torino, Italy.

E.mail: martindodman@libero.it

Perspective: *Educational vision*

Fields: *Human sciences*

Issues: *Civic environmentalism*

1. Introduction

Human behavior has an enormous impact on the planet we inhabit. Sustainability literature contains innumerable examples of the potentially devastating ways in which humans are interacting with and managing the natural world. Because humans are the source of the problems as well as the hope for finding solutions, the role of the social sciences in analyzing and understanding the concept of sustainability has grown in importance (Saunders, 2003). In particular, the domain of psychology, where the focus is on human thought, feeling, and behavior (Myers, 2003), can be seen as an essential component of the search for sustainable human trajectories. Indeed, several branches of psychology endeavor to study psychological pathways underlying human action in relation to the environment, in order to identify which mechanisms and factors may enhance, for example, a more sustainable attitude towards and use of natural resources.

Developmental theorists may, for example, be interested in the moral processes which lead to pro-environmental attitudes, thereby identifying the mechanisms underlying the development of those values that may predict pro-environmental behavior (e.g. Kahn, 1997). Social psychologists may be more likely to interpret the relationship between humanity and the use of natural resources as a social dilemma situation (Bonaiuto et al., 2008), where often acting pro-environmentally (e.g. using public means of transport) implies that individual interests (e.g. convenience of private means) may clash with a general collective interest (e.g. production of more CO2), thereby trying to identify in which social conditions people are more likely to think with a collectivistic perspective and thus act pro-environmentally. Environmental psychology may be interested in analyzing the environmental characteristics of the contexts in which people are daily embedded, in terms of how they may hinder or facilitate their engagement towards sustainability (Vining & Ebreo, 1992), whereas the focus of conservation psychology is more on the study of the relationship between human beings and nature with the aim of finding new strategies for encouraging people to care about and take care of the natural world (Saunders, 2001).

Thus, by investigating different and intersecting perspectives, psychology may furnish an important contribution to the understanding of how humans can move from an exploitative to a sustainable paradigm in the way they interact with the world they live in.

2. Sustainability and psychological discourse

In current psychological literature, the word "sustainability" rarely appears. Instead, we most commonly find the term "pro-environmental", which may refer to both pro-environmental attitudes (e.g. concern, norms, values) and behaviors (e.g. recycling, preventing waste, boycotting). One of the most widely shared definitions of pro-environmental behavior is that proposed by Stern (2000), who considers it broadly as "all types of action that change the availability of materials or energy from the environment or alter the structure and dynamics of ecosystems or the biosphere". Typical distinctions are then made between (Stern, 2000; Stern, Dietz, Abel, Guagnano, & Kalof, 1999):

- environmental activism: committed environmental activism (e.g. active involvement in environmental organizations and demonstrations), which is the major focus of research on social movement participation;

- non-activist behaviors in the public sphere: behaviors affecting the environment only indirectly, by influencing public policies (e.g. petitioning

on environmental issues, joining and contributing to environmental organizations, stated approval of environmental regulations, willingness to pay higher taxes for environmental protection). This is also referred to as environmental citizenship;

- private-sphere environmentalism: behaviors in the private sphere (e.g. the purchase, use, and disposal of personal and household products that have environmental impact).

Moreover, it is useful to subdivide these according to the types of decisions they involve: the purchase of major household goods and services that are environmentally significant in their impact (e.g., automobiles, energy for the home, recreational travel), the use and maintenance of environmentally important goods (e.g., home heating and cooling systems), household waste disposal, and "green" consumerism (purchasing practices that consider the environmental impact of production processes, such as purchasing recycled products and organically grown foods) (Stern, 2000).

Going beyond the specificity of different branches within the field of psychology - social, environmental, developmental, etc. -, most psychological studies that focus on human pro-environmental concerns and behaviors refer to four main theoretical models: the theory of planned behavior (Ajzen 1991), the value belief norm model (Stern, 2000), the activation theory (Schwartz, 1977) and the theory of normative conduct (Cialdini, Reno, & Kallgren, 1990).

Those theories focus on different processes that may influence people's attitudes towards the environment. However, they all consider variables at the level of the person as individual as the starting point of an explanatory process which may lead to pro-environmental engagement. In the theory of planned behavior personal attitudes,

subjective norms and perception of behavioral control are considered to be crucial variables (Ajzen, 1991), whereas personal norms, awareness of consequences and ascribed responsibilities are central to the norm activation model of Schwartz (1977). While personal values, beliefs and norms are determining factors in the value-belief norm theory of environmentalism (Stern et al., 1999), in the theory of normative conduct (Cialdini, Reno, & Kallgren, 1990) the focus is rather on social circumstances (e.g. personal benefits vs. social sanctions), descriptive norms (the norms driving the behavior that is considered as most "normal" because "everybody is doing so"), and injunctive norms (the norms that underline a moral judgment in behaving in a particular way).

These theoretical frameworks have been considered variously useful in the understanding of those mechanisms that underlie behaviors such as household recycling (Kaiser & Gutscher, 2003), choice of travel mode (Bamberg & Schmidt, 2003; Harland et al. 1999), use of water (Harland et al., 1999), and waste composting (Mannetti, Pierro, & Livi, 2004). At the same time, the factors considered in influencing people's pro-environmental behavior are clearly involved in reciprocal relationships of mediation or moderation and hence each situation results multi-faceted (Gifford & Nilsson, 2014). The need to consider in more detail the role of contextual factors has also emerged (Steg & Vlek, 2009; Wakefield et al, 2006). Currently several approaches to the development of sustainability argue that what is crucial is people's action within communities, therefore at local level (e.g. Agenda 21). However, what is lacking in psychological studies dealing with the topic of sustainability is adequate focus is on how people perceive their local community (Steg & Vlek, 2009; Wakefield et al, 2006; Uzzell, Pol, & Badenas, 2002) and which psychological mechanisms underline an

active engagement in terms of community safeguarding (Lewicka, 2010).

3. Civic environmentalism as an approach to the understanding of sustainability

The concept of civic environmentalism underlines the importance of considering the social relations within communities in the understanding of sustainability. Hempel (1999) defines a sustainable community as "a community in which economic vitality, ecological integrity, civic democracy, and social well-being are linked in complementary fashion, thereby fostering a high quality of life and a strong sense of reciprocal obligation among its members". This definition implies a holistic approach to sustainability by integrating the social and the ecological aspects of sustainability considered as both "process" and "phenomenon". Sustainability can be considered as a dynamic concept where these two aspects are strictly correlated, and it is indeed this correlation that is necessary for its development. In this sense, the concept of civic environmentalism is associated in particular with the concept of environmental citizenship (a kind of pro-environmental behavior) and can be defined as "a holistic appreciation of the inextricable links between environmental, social and economic characteristics of sustainable communities" (Agyemann & Angus, 2003), implying "local, collaborative decision making processes to generate innovative, non-regulatory solutions to a host of environmental problems" (Layzer, 2002). As Dobdon (2010) has argued, "though definitions vary, 'environmental citizenship' can be thought of as pro-environmental behavior, in public and in private, driven by a belief in fairness of the distribution of environmental goods, in participation, and in the co-creation of sustainability policy". In all these definitions we can find three key concepts: participation, cooperation between citizens and between policies and citizens. A participatory approach in the management of

environmental policy is therefore needed, because it allows to "move the focus from the 'rights' of a citizen to participate in policy making to the 'responsibilities' that a citizen has within his or her community" (Agyemann & Angus, 2003). The concept of civic environmentalism points to the fact that it is "the civic" and not just "the environmentalism" that has to be the focus of policies (Shutkin, 2000). By engaging people in inclusionary procedures, a sense of collective responsibility may thus be achieved. The concept of civic science also moves in the same direction, in that "it recognizes that science must become an increasingly interactive process between lay and expert people, reconnecting science and its cultural context… science must increasingly be linked to empowerment and activism and involve transfers of respect and power" (Warburton, 1988, p.3).

The same position is identifiable in Agenda 21, still, over 20 years after its publication, considered one of the most important frameworks on which environmental policies are based. For example, the document contains the following proposals: "Individual cities should, as appropriate: a) Institutionalize a participatory approach to sustainable urban development, based on a continuous dialogue between the actors involved in urban development (the public sector, private sector and communities), especially women and indigenous people; b) Improve the urban environment by promoting social organization and environmental awareness through the participation of local communities in the identification of public services needs, the provision of urban infrastructure, the enhancement of public amenities and the protection and/or rehabilitation of older buildings, historic precincts and other cultural artifacts. In addition, "green works" programmes should be activated to create self-sustaining human development activities and both formal and informal employment opportunities for low-income urban residents

[...] empower community groups, non-governmental organizations and individuals to assume the authority and responsibility for managing and enhancing their immediate environment through participatory tools, techniques and approaches embodied in the concept of environmental care" (United Nations Division for Sustainable Development, 1992).

Three principal concepts are recurrent - empowerment, public awareness and participation - and would seem to be the key processes through which people can influence the development of a sustainable society. Moreover, these processes occur at local level, in the communities where people's lives are embedded on a daily basis.

All the frameworks considered - civic environmentalism, environmental citizenship, the programme proposed by Agenda 21 - can be seen as a call to explore social processes within local communities as a vital component of being able to develop sustainability as a whole. The reference is to a definition of sustainability that underlines the need to recognize the importance of both the civic and the environmental dimensions and how they interact within communities, thereby considering that the development of sustainable communities should start through studying the relationships that exist between people within the community and between community members and their environment (Uzzell, Pol, & Badenas, 2002).

4. Psychology and civic environmentalism

The relationship within the concept of sustainability between both civic and environmental engagement can also be considered in terms of a bi-dimensional conceptualization of the local community: social (people sharing the place) and physical (the environment where people's lives take place). Both dimensions are crucial in the understanding of how people perceive their

contexts and several studies have shown the importance of both social networks and physical environment within communities for people's wellbeing. Focus on the social aspect of place has emphasized the importance of the concept of social capital, which can be defined as "the shared knowledge, understandings and patterns of interactions that a group of people brings to any productive activity.... It contributes to stronger community fabric, and, often as a by-product of other activities, builds bonds on information, trust, and interpersonal solidarity" (Roseland, 1998, p.8). Other studies have shown that an active engagement at community level can benefit individuals in several ways, in that it is positively related to a person's mental and physical health (Fitzpatrick and LaGory, 2000; Putnam, 2000; Scheufele and Shah, 2000) and happiness (Rose, 1999; Kim and Kawachi, 2006; Scheufele and Shah, 2000; Cooper et al., 1999). Moreover, it enhances affective support and mutual respect between citizens (Wilkinson, 1996; Kawachi and Berkman, 2000). From the perspective of the environmental dimension, having regular contact with natural elements is seen as being particularly beneficial at both individual and community level. Various studies have, for example, shown that workers who come into contact with nature demonstrate greater job productivity and satisfaction, together with reduced absenteeism (Kaplan, 1993), that playing in places with trees and vegetation has benefits for the development of children' skills and cognitive abilities (Taylor et al., 1998), or that hospital patients who are able to at least see nature around them recover faster from surgery and require less pain-reducing medication (Ulrich, 1984). Moreover, green spaces within places enhance the development of people's social capital by offering interaction opportunities for knowing each other and, in turn, developing affective ties between citizens and to the whole community (Kuo, 2003).

Thus it would seem that there is a clear link between individual, community and planetary wellbeing. The literature analyzing the processes underlying the relationship between people and their local life contexts contains concepts such as place attachment, place identity, community attachment, and sense of community, each of which are closely correlated (Giuliani 2002) and sometimes considered as overlapping (Lewicka, 2010). Studies have, however, offered different results concerning the exploration of the link between those processes and local action (Lewicka, 2010) and relatively few studies have explored it in terms of investigating sustainable development. Uzzell, Pol & Badenas (2002) showed that social cohesion within the community was associated with people's social identity, which in turn affected their pro-environmental attitudes and behaviors. Other studies have shown that the degree of people's identification with a place is associated with their engagement in their places (Pretty, Chipuer, and Bramston, 2003; Vaske & Kobrin, 2001), together with resulting increasing levels of mutual cooperation (Bonaiuto et al. 2008; Twigger-Ross, Bonaiuto, & Breakwell, 2003). Bonaiuto et al. (2008) found that the highest levels of voluntary cooperation in a water conservation project were detected among people with high local identity and those who perceived higher legitimacy for the local authority. The authors argue that: "The extent to which people identify with their local community is then a potentially important factor in determining the shift from a self- to a collective-interest in human behavior". If, on the other hand, projects or policies are perceived as a threat, some community members may show resistance (Manzo & Perkins, 2002), developing negative attitudes towards proposals. Edelstein (2003) argues that when residents are able to take control of the situation themselves and identify common interests and targets, they are more likely to be mobilized toward action and be empowered, thereby suggesting that by engaging people in inclusionary procedures a

sense of collective responsibility may be achieved.

The dynamic relationship between people and their environment therefore depends on a number of variables: to what extent they are attached to it, the role it plays for their identity and consequently for their wellbeing, to what extent they feel involved in its conservation. Moreover, what is crucial for the legitimacy of local authorities is the empowerment of people and to what extend they feel that they are able to make decisions about their places and be involved in their implementation.

The various studies analyze multiple aspects of the complex interrelationship occurring between the person, the whole community and the environment, while, at the same time, emphasizing the need to explore which bridging mechanisms may underpin this process in terms of the understanding of sustainability. What emerges is that a peaceful cohabitation between human beings and their environment is possible only if we redefine both the relations between people and the environment and between people themselves.

5. Conclusions

The aim of this paper is to emphasize the importance of the concept of civic environmentalism in the understanding of sustainability and to consider how psychological research may contribute to this.

A part of psychological literature endeavors to understand which mechanisms and factors are associated with individual pro-environmental values and behaviors. However, consideration of sustainability as a process that takes place in a context determined by both social and environmental interacting forces still needs to be further developed. In this respect, the concept of civic environmentalism can be considered as a holistic understanding of sustainability,

which considers both civic and pro-environmental aspects as crucial and intersecting dimensions for its achievement. As is stated in Agenda 21, this bi-dimensionality underlines the important role played by the interactions between different actors within local communities in the understanding of how a more respectful use of natural resources can be achieved. Both collaboration (helping each other according to an understanding of reciprocal needs and roles) and cooperation (working together to achieve common aims and products) (Roschelle & Teasley, 1995; Smith, 1995; Dillenbourg, 1996) are required, in order to develop a shared collective sense of responsibility, which in turn may motivate collective actions towards sustainability.

Various psychological mechanisms, such as social identity, place identification and a sense of empowerment, may underlie and determine people's willingness to act in collaborative and cooperative ways at local level. However, so far few studies have explored the association between those mechanisms and sustainable engagement. Individual, community and planetary wellbeing would seem to be clearly linked and dependent on the same crucial factors. It is to be hoped that more research will be done on the concept of civic environmentalism in the endeavor to identify which mechanisms in particular may enhance people's actions together within communities, in order to render them sustainable and protective of the environment of which they are a part and on which they depend.

References

Agyemann, J., Kollmuss, A. (2010). Mind the gap: Why do people act environmentally and what are the barriers to pro-environmental behaviour? Environmental Education Research, Vol. 8, No. 3, 2002.

Agyemann, J., Angus B. (2003). The role of Civic Environmentalism in the Pursuit of Sustainable Communities. Journal of Environmental Planning and Management, 46(3), 345-363.

Ajzen, I. (1991). The theory of planned behavior. Organizational Behavior and Human Decision Processes, 50, 179–211.

Bamberg, S., & Schmidt, P. (2003). Incentives, morality or habit? Predicting students' car use for university routes with the models of Ajzen, Schwartz and Triandis. Environment and Behaviour, 35, 264–285.

Bonaiuto, M., Bilotta,E., Bonnes, M., Ceccarelli, M., Martorella H. (2008). Local Identity and the Role of Individual Differences in the Use of Natural Resources: The Case of Water Consumption. Journal of Applied Social Psychology, 38, 4, pp. 947–967.

Cialdini, R.B., Reno, R.R., Kallgren, C.A. (1990). A focus theory of normative conduct: recycling the concept of norms to reduce littering in public spaces. Journal of Personality and Social Psychology, 58, 1015-1026.

Cooper, H., Arber, S., Fee, L. and Ginn, J. (1999). Social capital and health. London: Health Education Authority

Dillenbourg, P., Baker, M. Blaye, A & O'Malley, C. (1996). The evolution of research on collaborative learning. in Learning in humans and machines: Towards an interdisciplinary learning science, Spada, E. & Reiman, P. (eds) pp.189–211. Oxford: Elsevier.

Dobson, A. (2010). Environmental citizenship and pro-environmental behavior. Keele University, November 2010, available from: www.sd-research.org.uk

Edelstein, Michael R. 2003. Contaminated communities: Coping with residential toxic exposure. Boulder, CO: Westview Press.

Fitzpatrick, K., and LaGory, M. (2000). Unhealthy Places: The Ecology of Risk in the Urban Landscape. New York: Routledge.

Gifford, R., Nilsson, A. Personal and social factors that influence pro-environmental concern and behavior: A review. International Journal of Psychology. DOI: 10.1002/IJOP.12034

Giuliani, M. V. (2003). Theory of attachment and place attachment. In M. Bonnes, T. Lee, & M. Bonaiuto (Eds.), Psychological theories for

environmental issues (pp. 137e170). Ashgate, Hants.

Harland, P., Staats, H., & Wilke, H. A. M. (1999). Explaining pro-environmental intention and behaviour by personal norms and the theory of planned behaviour. Journal of Applied Social Psychology, 29: 2505–2528.

Hempel, L.C. (1999). Conceptual and analytical challenges in building sustainable communities, in: D.A. Mazmanian & M.E. Kraft (Eds) Towards Sustainable communitites: Transition and Transformations in Environmental Policy (Cambridge, MA, MIT Press).

Kahn, P.H., Jr. (1997). Children's moral and ecological reasoning about the Prince William Sound oil spill. Developmental Psychology, 33, 1091-1096.

Kaiser, F.G., Gutscher, H. (2003). The proposition of a general version of the theory of planned behaviour (TPB): predicting ecological behavior. Journal of Applied Social Psychology, 33, 396-417.

Kaplan, R. The Role of Nature in the Context of the Workplace. Landscape and Urban Planning, 26, 1-4, 1993, pp. 193-201.

Kawachi I, Berkman LF. Social cohesion, social capital, and health. In: Berkman LF, Kawachi I, eds. Social Epidemiology. New York: Oxford University Press; 2000: 174–190.

Kim, S., Kawachi, I. (2006). A Multilevel Analysis of Key Forms of Community- and Individual-Level Social Capital as Predictors of Self-Rated Health in the United States. Journal of Urban Health: Bulletin of the New York Academy of Medicine, 83(5): 813-826.

Kuo, F.E. 2003. The role of arboriculture in a healthy social ecology. Journal of Arboriculture 29, 3:148-155.

Layzer, J. (2002). Science, Citizen Involvement, and Collaborative Enviornmental Policymaking. A research proposal for Tufts University.

Lewicka, M. (2010). Place attachment: How far have we come in the last 40 years? Journal of Environmental Psychology 31: 207-230.

Mannetti, L., Pierro, A., & Livi, S. (2004). Recycling: planned and self-expressive behavior. Journal of Environmental Psychology, 24, 227-236.

Manzo, L. C., & Perkins, D. D. (2006). Finding common ground: The importance of place attachment to community participation and planning. Journal of Planning Literature, 20, 335e350.

Myers, D.G. 2003. Psychology, 7th Edition. New York: Worth Publishers

Pretty, Grace, H., Chpiuer, H., Bramson, P. (2003). Sense of place amongst adolescents and adults in two rural Australian towns: The discrimating features of place attachment, sense of community and place dependence in relation to place identity. Journal of Environmental Psychology 23(3): 273-87.

Putnam, R. (2000) Bowling Alone. New York: Simon & Schuster.

Rose, R. (1999). 'What Does Social Capital Add to Individual Welfare? An Empirical Analysis of Russia'. The World Bank Social Capital Initiative Working Paper, No. 15.

Roschelle, J., & S. Teasley. (1995). The construction of shared knowledge in collaborative problem solving, in Computer supported collaborative learning, O'Malley, C. E. (ed.) pp. 69–97, Heidelberg: Springer-Verlag.

Roseland, M. (1998). Towards Sustainable Communities: Resources for Citizens and their Governments. Gabriola Isalnd, BC, Ne Society Publishers.

Schwartz, S. H. (1977). Normative influences on altruism. In L. Berkowitz (ed.), Advances in experimental social psychology (Vol. 10, pp. 221–279). New York: Academic Press.

Shutkin, W.A. (2000). The Land that Could Be: Environmentalism and Democracy in the Twenty-First Century. Cambridge, MA, The MIT Press.

Scheufele, D. A., and Shah, D. V. (2000). "Personality Strength and Social Capital: The Role of Dispositional and Informational Variables in the Production of Civic Participation," Communication Research, 27, 107–131

Smith, K. A. (1995). Cooperative learning: Effective teamwork for engineering classrooms. Paper

presented at the annual ASEE/IEEE Frontiers in Education Conference, Atlanta. http://fie-conference.org/fie95/2b5/2b54/2b54.htm

Steg, L., Vlek, C. (2009). Encouraging pro-environmental behavior: An integrative review and research agenda. Journal of Environmental Psychology 29: 309–317.

Stern, P. C. (2000). Toward a coherent theory of environmentally significant behavior. Journal of Social Issues 56: 407–424.

Stern. P.C., Dietz,T., Abel,T., Guagnano G.A., & Kalof L. (1999). A Value-Belief-Norm Theory of Support for Social Movements: The Case of Environmentalism. Human Ecology Review, Vol. 6: 81-97.

Saunders C.D. The Emerging Field of Conservation Psychology. Human Ecology Review, Vol. 10 (2)

Taylor, A.F., Kuo, F.E. & W.C. Sullivan. Views of Nature and Self-Discipline: Evidence from Inner City Children. Journal of Environmental Psychology, 22, 2002, pp. 49-63.

Twigger-Ross, C., Bonaiuto, M., & Breakwell, G. (2003). Identity theories and environmental psychology. In M. Bonnes, T. Lee, & M. Bonaiuto (Eds.), Psychological theories for environmental issues (pp. 203–233). Aldershot, UK: Ashgate.

Ulrich, R. S. (1986) Human Responses to Vegetation and Landscapes. Landscape and Urban Planning, 13, pp. 29-44.

United Nations Division for Sustainable Development (1992). Agenda 21

Uzzell, D., Pol, E., Badenas, D. (2002). Place identification, social cohesion, and environmental sustainability. Environment and Behavior, 34, 26-53.

Vaske, J.J., Kobrin, K.C. (2001). Place Attachment and Environmentally Responsible Behavior. The Journal of Environmental Education, 32 (4), 16-21.

Vining, J., & Ebreo, A. (1992). Predicting recycling behavior from global and specific environmental attitudes and changes in recycling opportunities. Journal of Applied Social Psychology, 22, 1580-1607.

Wakefield, S. E. L., Elliott, S., Eyles, J.D. & Cole, D.C. (2006). Taking Environmental Action: The Role of Local Composition, Context, and Collective. Environmental Management Vol. 37, No. 1, pp. 40–53.

Warburton, D. (1988) (Ed). Community and Sustainable Development. London: Earthscan

Wilkinson, R. (1996). Unhealthy societies: the afflictions of inequality. London: Routledge