

Mitteilungen der Deutschen Gesellschaft für Humanökologie (DGH)

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Integrating social psychological theories for interdisciplinary global change research

At present, there is much interest amongst academic circles as to what precisely constitutes inter- and trans-disciplinarity in global change research. Global change issues are characterised by certain distinguishing features that demand fresh research approaches which optimally operate on a large canvas in terms of policy inter-linkage and time-scales of action. Global environmental change should connect the planetary to the local, the aggregated collective outcome to individual outlooks and behaviour, and the immediate gains from self-gratifying action to the middle-term consequences for those not yet born. There is, as yet, no form of governance, nor of personal perspective in attitude-behaviour relationships, that can encompass such unavoidable connections. One purpose of human dimensions research is to understand better the underlying social and personal motivations which hinder the integration so urgently required. Another role is to try to create the circumstances through which these connections can be fostered, and to evaluate and to predict how such democratic circumstances can be enabled to flourish.

The case study which follows reveals how an approach, making selected use of social psychological theories, can help to create such supportive circumstances for linking global to local, individuals to networks, and ideas to collective actions with regard to climate change.

The strength of social psychological theories lies in understanding the nature of the individual as a "whole person" as well as a social actor, and in linking this dual role to the extension of empathy towards sometimes conflicting interests of others. Developing a more common identity over how problems and solutions are interpreted and resolved should provide a valuable means of linking the global to the local in human dimensions research.

The *focus* here is on citizens' response to climate change mitigation options, drawn from work in the CLEAR (Climate and Environment in Alpine Regions)

project ^[1]. Social psychological theories of dissonance and denial are introduced as explanations for why citizens' seek to avoid changing their cherished ways of life when being required to do so in the interests of reductions in greenhouse gas emissions. It is important to mention here that social psychological theories have also been applied successfully to the field of biodiversity research ^[2].

The *approach* taken in Switzerland used qualitative tools such as Grounded Theory and IA focus groups (IA: Integrated Assessment). Grounded Theory is a sequential and exploratory process of evolving theory from actual evidence ^[3]. This is a valuable approach when interview evidence permits creative exploration of a number of forms of enquiry. Focus groups are basically groups of people being exposed to some common stimulus. In this case participants interacted with IA computer models about possible causes and consequences of climate change. The groups then were invited to engage in a free-wheeling conversation about the topics in the models, giving policy-relevant informations in form of citizen reports ^[4]. This allowed participants to talk to each other in order to clarify their outlooks and belief patterns regarding the highly complex aspects of grappling with their inherent contradictions of personal preferences and their moral sensitivities

towards future energy options and forms of governance.

The *outcome* is that Swiss citizens generally perceive climate change risks as an alarming prospect, along with other environmental problems. A majority of participants perceive a world characterised by high levels of energy use as worrying, if not nightmarish. Consequently, a future characterised by low levels of energy use is often regarded as an attractive option. This apparent consensus over the "goodness" of low-energy futures revealed a fundamental contradiction in outlooks and preferences for consumption behaviour. This paradox was that almost nobody seemed prepared to take the kinds of personal actions that each participant deemed necessary to achieve such a future.

Attitudes help a person to mediate between the inner demands of the self and signals arising from the outside world ^[5]. Attitudes also seek to establish a sense of consistency, and hence inner calm ^[6]. The lack of consistency is the state of *dissonance*. In general individuals experiencing dissonance seek to resolve it, deny it, or displace it. The IA focus group research shows, for the most part, that denial or displacement act powerfully to maintain the gap between attitude and behaviour with regard to climate change norms.

One area of consistency analysed here lies in the possible disjunction between a personal preference for a particular lifestyle, consumption habit, or behavioural choice, and the need to respond effectively to climate change mitigation strategies. In short, people may profess anxiety over climate change, yet be faced with internal resentment or even denial over what they cannot accept as a justifiable change in behaviour. Possible ways in which this denial may occur include "fabricated constraints" (*>there*



Mit diesem Beitrag möchte die DGH ihr jüngstes Mitglied im Vorstand der Gesellschaft vorstellen: Susanne Stoll-Kleemann wurde im Mai 2003 in den Vorstand gewählt.

Dr. Susanne Stoll-Kleemann ist eine interdisziplinär forschende Sozialwissenschaftlerin (Studium der Geographie und Soziologie/Politikwissenschaft) in den Bereichen Global-Change-Forschung/Nachhaltigkeitswissenschaft (Schwerpunkt Biodiversität). Sie hat weitere Forschungserfahrungen in der Umweltpsychologie und Humanökologie mit einem besonderen Fokus auf partizipativen Ansätzen und Stakeholder Dialogen. Bevor sie an die Freie Universität Berlin ging, arbeitete sie als Projektleiterin unter anderem am Potsdam-Institut für Klimafolgenforschung (PIK) sowie an der Eidgenössischen Anstalt für Wasserversorgung, Abwasserreinigung und Gewässerschutz (EAWAG) in Dübendorf bei Zürich, in der Abteilung Humanökologie. Ihr jüngstes Buch, welches sie gemeinsam mit Tim O'Riordan bei Cambridge University Press herausgebracht hat, hat den Titel *Biodiversity, Sustainability and Human Communities*.

are too many impediments»), "ignorance" («I simply don't know the consequences of my actions»), or the denial of responsibility in general («I am not the main cause of this problem») [7].

From an emotional viewpoint such responses help to assuage guilt, to reinforce victim status, to justify resentment or anger, and to emphasise the negative feelings towards disliked behaviour (for instance, the disagreeable qualities of relying on public transport and the loss of social prestige involved).

Based on this *theoretical perspective* which is supported empirically, and especially taking into account the "barriers of denial" listed above, it has been found that denial in the face of political and moral exhortations to change behaviour in the cause of mitigating climate change is reinforced by the following reactions:

- an unwillingness to give up customary habits and favoured lifestyles which are closely associated with a sense of self-identity;
- the construction of attitude and behaviour connections that regard any costs to the self as greater than the benefits to others, notably to the unborn;
- a lack of acceptance that the climate problem is as serious as made out, and the belief that in any case it can be resolved by recourse to technological and regulatory innovation [8].

These *findings* reveal both, a coherence and a rationality to dissonance and denial that will not make it easy for democracies to gain early consent for tough climate change mitigation measures. This is a critical finding for global change research. It suggests that to shift people towards low carbon futures may require a huge and progressive culture shift over a generation or more. For such a shift to be embedded in the individual and collective psyche may well require a combination of technology, new forms of local governance, and more partnership-based combinations of co-operation between the various public and private spheres than ever contemplated heretofore.

The *application of social psychological theories* provides a rich interpretation as to why attitudes do not readily fit with behaviour. Further research extending these theories by building on the procedures reported on here, using a wider array of participants, and taking place in other political cultures, should reveal more fundamentally the nature of the barriers to citizen action. The results of these studies need to be carefully translated into appropriate policy action

through dialogue with policy-makers and decision-takers. In this way a blend of social psychological and political perspectives may provide the most relevant theoretical and policy framework.

The climate change study suggests the scope for a more effective linkage between social psychological research, new forms of participatory visioning, and enriched dialogue with policy-makers and all levels of government. If fresh approaches to explaining and presenting the modelling of climate futures are pursued so as to enable citizens to understand the consequences of various combinations of policy options, then interactive research offers very exciting possibilities for incorporating innovative forms of democracy into climate change politics [9].

As we move towards more *interactive and transdisciplinary approaches* to human dimension research, we may find it fruitful to borrow from social psychological experiences, blend these with other social sciences approaches, notably from economics, political science, and sociology, and embrace the potential for creating new theory out of active engagement with stakeholders.

One important theme for the forthcoming round of human dimensions research is *connectivity*. We remain in need of improving research approaches for linking global to local, personal to communal and short to long term. This is an age-old set of dichotomies, which forms the basis of democracy and social justice.

Transdisciplinarity will surely flourish in the kinds of research settings that global environmental change problems now demand. These combine the measured with the motivational, the subject participant to the sentient person, the institutional and social framing of outlooks to the opportunities for revelation and refreshment in outlook and action. In so doing, the transdisciplinary works sequentially, in various groupings of colleagues, in combinations of academics and practitioners, and in the recognition that precautionary science requires a functioning democracy, and not just the trained and careful scientist.

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[1] The findings come from the Swiss ICRA (Integrated Climate Risk Assessment) project, one of 15 sub-projects of the interdisciplinary project CLEAR funded by Swiss National Science Foundation. CLEAR was an effort to

increase understanding of the potential impacts of climate change for Switzerland and to provide policy relevant information which can support decision-making. The method for analysis selected here was the conduct of IA focus groups. The project was carried out in close connection with the European ULYSSES project. For further details see S. Stoll-Kleemann, T. O'Riordan, C.C. Jaeger: "The psychology of denial concerning climate mitigation measures: evidence from Swiss focus groups", *Global Environmental Change* 11/2 (2001) 107-117;

S. Stoll-Kleemann, T. O'Riordan, T. Burns: "Linking the citizen to governance for sustainable climate futures", in B. Kasemir, M. Gardner, J. Jäger, C.C. Jaeger (Ed.): *Public Participation in Sustainability Science*, Cambridge University Press, Cambridge (2003), p. 239-248.

[2] See for example S. Stoll-Kleemann: "Barriers to Nature Conservation in Germany – A model explaining opposition to protected areas", *Journal of Environmental Psychology* 21/4 (2001) 369-385.

[3] B.G. Glaser, A.L. Strauss: *The Discovery of Grounded Theory – Strategies for Qualitative Research*, Aldine de Gruyter, New York (1967).

[4] C.C. Jaeger, B. Kasemir, S. Stoll-Kleemann, D. Schibli, U. Dahinden: "Climate change and the voice of the public", *Integrated Assessment* 1 (2000) 339-349;

see also B. Kasemir, D. Schibli, S. Stoll, C.C. Jaeger: "Involving the Public in Climate and Energy Decisions", *Environment* 42/3 (2000) 32-42.

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W.J. McGuire: "The nature of attitudes and attitude change", in G. Lindzey, E. Aronson (Ed.): *Handbook of Social Psychology*, 3rd edition, Random House, New York (1985); D.C. Pennington, K. Gillen, P. Hill: *Social Psychology*, Oxford University Press, London (1999).

[6] L. Festinger: *A Theory of Cognitive Dissonance*, Stanford University Press, Stanford, CA (1957); F. Heider: "Attitudes and cognitive organisation", *Journal of Psychology* 21 (1946) 107-112.

[7] J. Schahn: "Die Rolle von Entschuldigungen und Rechtfertigungen für umweltschädigendes Verhalten", in J. Schahn, T. Giesinger (Ed.): *Psychologie für den Umweltschutz*, Beltz, Weinheim (1993), p. 51-61.

[8] S. Stoll-Kleemann, T. O'Riordan, C.C. Jaeger: "The psychology of denial concerning climate mitigation measures: evidence from Swiss focus groups", *Global Environmental Change* 11/2 (2001) 107-117.

[9] S. Stoll-Kleemann, T. O'Riordan, T. Burns: "Linking the citizen to governance for sustainable climate futures", in B. Kasemir, M. Gardner, J. Jäger, C.C. Jaeger (Ed.): *Public Participation in Sustainability Science*, Cambridge University Press, Cambridge (2003), p. 239-248.

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