

New Departures in Tackling Urban Climate Change: Transdisciplinarity for Social Transformation (a critical appraisal of the WBGU's 2011 Report)

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Abstract: In 2011 the German Advisory Council for Global Change (WBGU) published a remarkable policy document entitled *World in Transition: A Social Contract for Sustainability* in which the authors proclaim the need for a great social transformation at the global scale in order to address climate change. This article builds on and critically discusses the central messages of the report that emphasizes the necessity to pro-actively shape the change of our values and worldviews that underpin our lifestyles and consumption patterns. By arguing for a transdisciplinary approach to implement this challenging vision the report identifies urbanization as a significant dimension in these processes thus shifting away from the dominant focus on socio-technical solutions. This puts the field of urban planning and development and related disciplines at the centre of the climate change adaptation and mitigation debate raising profound questions as to how these professionals, academics and practitioners could respond to the ideas brought forward in the report. The author considers this an opportunity for hitherto largely neglected integral approaches to gain more importance in mainstream urban planning practice and theory. The concluding part sketches out an initial research programme based on the previous discussion in order to illustrate at a more concrete level the implications of an integrative, transdisciplinary framework for planning.

Keywords: Climate change, social transformation, values changes, transdisciplinarity, integral theories, urbanization, urban planning.

The city is an ecosystem as intricate part of the Earth and ecological integrity is an important guideline. [...] The social, cultural, political and spiritual challenges are respectfully intertwined. Together they lead the way to unprecedented innovation and value added solutions. (Walas Concepts, n/d, p. 4)

Introduction

How humanity will be able to mitigate the impact of and adapt to climate change is decided to a great extent in urban areas. The urgency presently created by urbanization is twofold. More

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than half the world population already lives in cities, consuming approximately three quarters of global primary energy produced - with both these phenomena showing an upward trend.

In this respect, last year's report, *World in Transition: A Social Contract for Sustainability*² published by the German Advisory Council on Global Change (WBGU), is remarkable for its thematic focus on the inevitability of a social transformation to achieve global sustainability particularly in view of climate change. It is remarkable because this can be viewed as a significant attempt to expand the contemporary focus on climate change analysis and response beyond technological solutions and innovations into the realm of cultural change, a hitherto largely neglected research and policy area. The existence of the Council dates back to the year 1992, when it was set up by the German government as a scientific advisory body in the run-up to the Rio Earth Summit. Ever since its members have been eminent scientists, among the currently serving members are such internationally renowned climate and social scientists like Prof. Dr. Schellnhuber³, Prof. Dr. Messner⁴ and Prof. Dr. Leggewie⁵. According to its homepage the Council's principal tasks are to:

- analyse global environment and development problems and report on these,
- review and evaluate national and international research in the field of global change,
- provide early warning of new issue areas,
- identify gaps in research and to initiate new research,
- monitor and assess national and international policies for the achievement of sustainable development,
- elaborate recommendations for action and research and
- raise public awareness and heighten the media profile of global change issues.

Precisely because it confirms the central role of sustainable urban development, the authors identify *Transformative Governance of Urbanisation* as one out of three “key transformation fields” at the global level. This essay employs an integral lens using this publication as a red thread and impetus to discuss the novelty of such an approach to climate change as well as some of the main issues, arguing that this shift of attention (in worldview in fact) requires a critical and fundamental review of our existing urban planning frameworks, concepts, methods and practices.

Because I refer to a range of terms related to the “integral paradigm” throughout this essay, I deem it necessary to briefly clarify my take on these concepts right at the outset. Presently there are considerable conceptual overlaps and links between the terminologies used to characterise

² There is a notable loss of meaning in the English version of the report's title and in the name of the Council itself. In German: Wissenschaftlicher Beirat der Bundesregierung Globale Umweltveränderungen (WBGU), 2011, 'Welt im Wandel: Gesellschaftsvertrag für eine Große Transformation'. A *verbatim* translation of the Council's name would reflect the focus on the environment and sustainability: “German Advisory Council on Global Environmental Change”, while the German title of the report reflects better the actual thematic focus on social transformation and the issue of values change to achieve sustainability.

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this emerging “all-encompassing,” integral worldview. A crucial reason for this is that it is a contemporary, very fluid process of theorising that is still searching for defining terms like integralism, meta-theory, (w)holism, and transdisciplinarity. I use integrative and integral interchangeably, similar to Benedikter and Molz (2012) who term these “paradigmatic attempts” integrative, inclusive or integral. These two scholars point out “Integral, integrative, inclusive or holistic, while not being fully identical in their denotation, cognitive interest and core concept, have shifted their meaning from depicting an imaginary whole [...] to the search for inclusion for the largest number of possible viewpoints on one and the same issue or question, even if those viewpoints may be conflicting with each other” (Benedikter & Molz, 2012, p. 34). It is the second part of the quote that I consider particularly valuable emphasizing diversity, contradiction, conflict and perhaps even paradox in our increasingly complex and crisis ridden times. Integrative approaches such as Ken Wilber’s Integral Theory⁶ are considered metatheories by scholars like Reynolds (2006, p. 121), Wallis (2010) and Edwards (2010, p. 16). The latter terms the meta-theoretical response to theoretical pluralism “integrative pluralism”, thus suggesting, on the one hand, that the diversity of theories be retained and connected, whereas, on the other hand, there can be meta-theories that are not integrative if they do not so.

Even though transdisciplinarity will be given more space in the discussion to follow due to its central place in the WBGU report, it is important to state here that transdisciplinarity is clearly linked to an integral and meta-theoretical discourse as well (e.g., Gidley, 2008; Riedy, 2007). According to Nicolescu (2002), the term transdisciplinarity can be used as a philosophy (a stance, placing it in the larger context of our existence⁷), an epistemology (integration and unity of knowledge, non-dualism) and a methodology (resolving practical issues in problem-oriented scientific research, particularly environmental studies). For instance, the integral model presented by Wilber respects multiple validity claims, since each quadrant’s domain acknowledges evidence from different data using different methods. By virtue of this fact, Integral Theorists (Esbjörn-Hagens & Zimmerman, 2010, pp. 66-76) stress that an integral approach can provide a more comprehensive way to understand climate change and thereby produce more adequate solutions as it integrates disciplines by including and transcending them: “[...] it [Integral Theory] ‘hovers’ above conventional disciplines, providing a map for understanding how they relate to and influence each other. The integral framework is perhaps better described as a *transdisciplinary* framework that serves to integrate each discipline or approach into a larger picture, rather than as a multi- or interdisciplinary framework that brings different disciplines together, without necessarily accounting for the synergies between perspectives and domains of reality” (O’Brien & Hochachka, 2010, pp. 93-94). According to these “integral” scholars it appears that “transdisciplinarity”, “(integrative) metatheorising” and “integral” carry very similar if not identical conceptual meanings and connotations.⁸ Important for the following exploration is

⁶ It has become convention to refer to Wilber’s approach in capital letters in order to distinguish it from other integrative frameworks.

⁷ “The sum of the knowledge about the universe and natural systems, accumulated during the twentieth century, far surpasses all that has been known during all other centuries combined. How is it that we know more about what we do, and less about who we are?” (Nicolescu, 2002, p. 6).

⁸ This discussion on terminological permeability could be further expanded. In Critical Realism, for example, the term postdisciplinarity is introduced with a seemingly similar meaning like Nicolescu’s notion of transdisciplinarity: “*Postdisciplinarity* [...] envisages the demise of disciplines as we know them and revels in the freedom, eclecticism and new sense of unity this is supposed to bring” (Hartwig, 2007, p. 259).

how these notions differ from the understanding the WBGU postulates about transdisciplinarity and the use of “integrative/integrated” within the urban planning community.

Accordingly, the logic of the argument is developed along four key themes. It begins with a broad view about the interface of the state of the world and the notion of planetary interdependence in the context of climate change pointing out an underlying convergence in this regard of the modern sciences and wisdom traditions. This part highlights the endeavour of integral frameworks to bridge existing divides of science and religion, objectivity and subjectivity, among others. A following section, Pathways to action, takes up one of the central theses of the WBGU report, notably the change of values as a precondition for social transformation. In this section I discuss the existing gap of intellectually and cognitively understanding the link between consumption patterns and greenhouse gas emissions on the one side, yet an inability to act accordingly on the other side. Integral frameworks, it would seem, have the potential to bridge this gap through their explicit appreciation of the interior dimension of human life, and a recognition of practises that can systematically transform consciousness. The next part provides a generic overview of the current state of affairs in urban planning and development as one of the key strategic areas defined in the WBGU report. Here the underpinning thesis postulates that urban development, being considered an interdisciplinary policy area, must be complemented by a transdisciplinary approach if it is to respond more adequately to the challenge of climatic change. Thus the concept of transdisciplinarity highlighted by the authors of the report is discussed with respect to the discourse of and potentials integral frameworks might hold for contemporary urban planning practise and theory. In virtue of the conceptual and largely abstract analysis up to this point, it is important for a practice-oriented field like urban planning to attempt in the conclusion presenting a way forward. This is offered by way of drafting a research agenda which outlines some concrete areas for further study.

Planetary Interdependence: Complexity and Interconnectedness in Science and Ancient Wisdom Traditions

In this section I describe how, in the 20th century, scientific advancements discovered complexity and interconnectedness as essential defining aspects of the universe and its relationship to global climatic change. Interestingly, especially the notion of interconnectedness has been an essential part of ancient wisdom traditions, which therefore may have a potential to contribute in their own way to finding a solution to the problem.

As the quote at the beginning suggests, cities can be seen as one of the most complex systems created by humans. In the 20th century, the “systems” perspective became one of the most prominent approaches of understanding reality in the natural and social sciences alike. This has also been the primary approach in the assessments of the Intergovernmental Panel for Climate Change (IPCC). While the importance and significance of this scientifically grounded research is not questioned, climate change involves more than that, for it also “[...] is closely related to how humans perceive themselves in the world and how they confront change. In fact, although it is certainly about the climate, at another level it is about how humans both create and respond to change” (O’Brien, 2009, p. 1). In its appraisal of ongoing funded research projects on urbanization and climate change in Germany and the EU, the WBGU criticizes just that:

“Particularly the cultural aspects, which – as they determine innovation acceptance and diffusion and consumption behaviour – are central to the transformation success, are not sufficiently taken into account in the programmes, or not explicitly mentioned” (p. 345). It is this omission of the inter-subjective (cultural) and subjective (psycho-spiritual) realms where current urban practice and research on climate change appears to be largely blind.

In a way the issue of climate change challenges our ways of thinking, doing research and seeing the world. Because by and large “scientism” has become a predominant notion that led to an objectification of the world and an analytical approach of disciplinary (hyper-) specialisation, scholars remain in their field of expertise and find it hard to consider and study the existing connections through boundary-crossing research. Ironically, to a large part driven by this scientific quest in quantum physics and the life sciences, the past century witnessed a convergence of science and ancient wisdom traditions by virtue of the shift from a predominantly mechanistic to a complex systems worldview that is characterized among others by non-linearity, complex causal interrelationships and -dependencies, feedback loops, co-evolution and emergence, a blurring of the subject-object relationship, autopoiesis, et cetera. One of the most far-reaching insights of quantum physics is probably the (re-)discovery of non-separability as a type of causality, i.e. all entities interact no matter what their distance is (Nicolescu, 2002), an insight not entirely new to Hindu and Buddhist thought, among others.

This universal (global) interconnectedness is now forcefully placed in front of us through the issue of climate change, as noted in the Human Development Report 2007/2008 that states a “fundamental sense in which climate change challenges us to think differently about human interdependence” (UNDP, 2007, p. 60). In this report we also find a reference to ancient Greek philosophers applying a model of concentric circles to understand human affinity “from family, to locality, country and the world” thus recalling in principle the notion of a holonic universe as found in many illustrations of Integral Theory (e.g. Wilber, 2000 and 2007). A notion of this interrelatedness would evoke serious questions of morality, for we are nowadays more often made aware about how our consumption affects lives in other parts of the world. In other words, a “rich individual” is inescapably connected by his/her consumption patterns to a “poor/vulnerable person” in a far away country/ region. Accordingly, the authors of the Human Development Report argue that this knowledge about planetary interconnectedness would also invoke an ethical responsibility which can no longer be denied. As a common ground inherent to and uniting all religions/faiths, the report points out, we find stewardship, social justice and environmental ethics (UNDP, 2007, pp. 60-61).

Developing a planetary consciousness is thus one of the foremost tasks ahead of us, one might think, but has received not much attention so far in most public discourses. It will require a shift in worldviews from an egocentric *I* to ethnocentric *us* to a planetary *all of us*. While this dimension is briefly discussed in the WBGU report with respect to global governance, the authors remain practically within the framework of ‘Western’ positivist science merely taking into account “present relevant knowledge of cognitive science, psychology, anthropology, cultural sciences and sociology” (p. 327). In doing so they remain doubtful “whether humans, as ‘cooperative animals’ (Tomasello, 2009), are fundamentally capable of developing a global ‘We’ identity” (p. 327). As a consequence, it is recommended that “it must generally be determined whether there are cognitive boundaries which fundamentally overtax humans and human societies, and how these can be overcome, if applicable” (p. 327). An issue as existential for

humanity like climate change should urge us to think far beyond such conventional disciplines or at least make a significant attempt to drive them further into new areas. In my view we can possibly not afford neglecting the potentials of a spiritual approach to life, nature, and the universe, an area that is increasingly returning to the public realm. Political philosopher Michael Sandel commented recently: “Consider the environment [...] real change will depend on changing people’s attitudes toward nature and rethinking our responsibilities towards the planet we share. This is a moral *and* spiritual project, not only an economic one.” (Sandel, 2009; emphasis added).

Because integral frameworks generally adopt a critical stance towards existing thought paradigms and global issues, they carry a strong and explicit element of human emancipation including the power to release transformative energies in individuals and at the collective level.⁹ Hence it is in this area that integral approaches such as Ken Wilber’s Integral Theory and Roy Bhaskar’s Critical Realism and philosophy of Meta-Reality can contribute to the discourse of sustainability and climate change (e.g., Bhaskar et al., 2010; Brown, 2006; Esbjörn-Hargens and Zimmerman, 2009; O’Brian & Hochachka, 2010; Zimmerman, 2009). Hamilton (2008) in particular has developed an important approach to the integral city that explicitly acknowledges the urban bio-ecoregion and the evolution of consciousness. She draws from a range of integral and related thinkers including Ervin Laszlo, Clare Graves, Don Beck and Ken Wilber to develop a new imaginary of the city:

An Integral City is a way of looking at the city, regardless of its size, to see it as if it were a whole system – a living system that has emerged from an ecology of consciousness and includes (but is not limited to) discursive, political and religious/spiritual contexts together with a specific natural environment (such as mountain, sea or prairie), climate and natural ecology. As such, an Integral City is dynamic, adaptive and responsive to its internal and external life conditions. (Hamilton, 2008, pp. 51-52)

In this approach ecology and the human-nature relationship are central to the notion of cities, i.e., the relationship of cities to the carrying capacity of their ecoregion and the Earth as a whole. Hamilton’s observation is that “we lack both a philosophy and a science of sustainable human settlement. That is what Integral City seeks” (Hamilton, 2008, p. 9). As a result, it is crucial how we value the relationship of city and ecoregion. She urges that every city should maintain a stewardship relationship with its ecoregion and with the overall wellbeing of the earth, because the current stage of human history would demand we re-appreciate this relationship.¹⁰

⁹ In the introduction to his “Reflections on Meta-Reality” Roy Bhaskar states: “The philosophy of Meta-Reality describes the way in which this very world nevertheless depends upon, that is, is ultimately sustained by and exists only in virtue of the free, loving, creative, intelligent energy and activity of non-dual states of our being and phases of our activity. In becoming aware of this we begin the process of transforming and overthrowing the totality of structures of oppression, alienation, mystification and misery we have produced; and the vision opens up of a balanced world and of a society in which the free development and flourishing of each unique human being is understood to be the condition, as it is also the consequence, of the free development and flourishing of all” (Bhaskar, 2002, p. 8).

¹⁰ Since this is very much (evolutionary) work in progress it is worthwhile to visit Marilyn Hamilton’s website on www.integralcity.com to see the application of this approach to urban development.

Homer-Dixon, who authored “The upside of down: catastrophe, creativity, and the renewal of civilization” (2006), outlined some of the key issues any serious investigation of responding to climate change must incorporate at the conference “The Great Transformation: Climate Change as Cultural Change” in Germany in 2009. He identifies in his analysis four distinct yet interconnected areas of transformation: cognitive, economic, political, and normative.¹¹ Similarly to above statement he argues: “Politically, we need to extend the boundary of our conception of community – the boundary of the ‘we’ – to encompass the entire species.” In his view, political transformation will build collective intelligence. For normative transformation to succeed “we have to move from a narrow, utilitarian discourse on our motivating values to a more vigorous consideration of the moral and especially existential values that determine our view of ‘the good life’.” He identifies three categories of values: (a) simple preferences (utilities), (b) moral values (oughts), and (c) existential/spiritual values (which bring meaning into lives, the cosmos and the world, i.e., what is “a good life”). Tellingly, he pointed out that in public attention and discourse the value categories would usually receive decreasing attention from one to three. Lastly, Homer-Dixon made a crucial comment indicating a next stage in the consciousness of humanity: “These four transitions, should we make them successfully, will mark a shift from a stage of the development of our species analogous to adolescence – characterized by exuberance, narrow self-interest, short time horizons, a tendency towards self-gratification, and a sense of invulnerability – to one analogous to adulthood.” Interestingly, this sounds almost like a reference taken from Wilber’s (2000) work who exhibits a similar understanding of consciousness development at individual and societal levels. It seems these two perspectives indeed converge here even though Homer-Dixon does not refer directly to Wilber’s Integral Theory.

By bringing together Western psychology with the philosophies and practices of ancient wisdom traditions a great potential for contributing to the resolution of contemporary crises may arise, because the latter have developed techniques of spiritual growth which go beyond the physicality of the body working at a more subtle level deeply on the mind and soul, thus carrying the potential to overcome the “cognitive boundaries” previously mentioned (e.g., Combs, 1996). For example both developmental psychology and many spiritual traditions such as Sri Aurobindo’s Integral Yoga (Satprem, 1970; Sri Aurobindo & The Mother, 1973), stress the evolutionary character and capacities of individuals and human societies. Their models of human development include an ongoing evolution of consciousness which eventually will help to overcome currently existing cognitive limits. Surely this is an area widely disregarded as esoteric and irrational, especially in the secularised societies of Western Europe, but religious sociologists, philosophers and theologians currently observe a process of increased spiritualisation and resurgence of religiosity across the world (Heelas & Woodhead, 2005; Tacey, 2003). In a global perspective, this phenomenon of increased public visibility of religiosity and spirituality has many faces and must be seen in relation to the respective social and cultural contexts, e.g., Pentecostal Evangelism in Latin America and African Countries, individualised eclectic spirituality practiced outside the churches in many Western countries (Knoblauch, 2009; Mohrmann, 2010), or more fundamentalist like the Indian *Hindutva* movement (Hansen, 2004; Jaffrelot, 1999). Interestingly, many of these movements are concentrated in urban settings, thus gradually triggering more attention by urban researchers and

¹¹ Everything cited here about Homer-Dixon’s approach is taken from my personal conference notes: The Great Transformation: Climate Change as Cultural Change, International Conference, June 8-10, 2009, Essen (Germany), www.greattransformation.eu.

planners as well (metroZones, 2011; Beaumont & Baker, 2011; Woiwode & Scholz, 2012). To be clear, not all of these are part of an integral perspective of spirituality rooted in a (post-) postmodern worldview valuing among others inclusion, emancipation, wholeness by integrating “multi-rational modes of cognition” that bridge scientific reason and individual reflexivity (Benedikter & Molz, 2012, p. 61).

Nonetheless, based on this understanding of global interdependence, the role of science and ancient wisdom traditions, the subsequent paragraphs will more explicitly explore social transformation in terms of changing values, consciousness and change agents.

Pathways to Action: Changing Values, Changing Consciousness and Change Agents

Novel in this report is indeed - compared to the usual focus on innovative technologies - the extensive attention and emphasis on a change of values and the role of change agents to address climate change. This achievement in itself is due to the fact that the report was developed by a truly interdisciplinary panel of high level scholars who worked together on integrating their disciplinary views. In contrast, for long the “hard” climate sciences have informed and driven the options for solutions to climate change, whereas the humanities did barely contribute to the debate – while the latter may be partly blamed due to their failure to contribute significantly to the debate, it is certainly also partly on account of the very dominance of the natural sciences in the analysis of climate change. Yet the cumulative effect of more recent crises like soaring global food prices, financial turmoil and securing increasing energy demands have an empowering effect on formerly marginalized views about development and economics, especially in bringing qualitative aspects to the fore.

In essence, these “academic underdogs” have for quite some time now asked critical questions such as “What is a good life and good quality of life? Which values and worldviews define a good life? What are alternative development models?” or even more radically taking an anti-development position by critically questioning the ideology and notion of development itself. Critical commentators and writers on development theories have highlighted the narrow-mindedness of the modernist, materialist, technical notion dominant in mainstream development for a long time (e.g., Max-Neef, 1982, 1991; Rahnema, 1997; Rist, 2002; Sachs, 1992; Schumacher, 1973). It seems consumption patterns and urban life are now more seriously being reviewed, shifting the focus away from the dominating growth paradigm towards “prosperity without growth” (Jackson, 2009). As the WBGU report interestingly points out, development is being measured not merely in quantitative terms (ever more of everything) but with a view to well-being and happiness as well. Accelerated by the financial crash there is an increasing body of literature available now proposing unconventional approaches to economic thinking that has, in addition, also stepped out of a purely academic discourse (especially those publications on happiness and well-being). Gradually, this subject is discovered by international development experts as well, as demonstrated by the 3rd Bonn Conference on International Development Policy in January this year which was entitled “Global Lifestyles-New Pathways for Development Policy”. Often we learn that people need to be made aware of environmental problems, and that many already are - the WBGU provides an overview of the proliferation of environmental values across countries based on the World Values Survey -, but most would not

act accordingly in their day-to-day life. The crucial shortcoming of this approach and analysis is the fact that almost no attention is being paid to human psycho(-spiritual) capacities of development – i.e. consciousness development and spiritual growth-, but only on public education to influence behavioural change, whereas interior human capacities for the development of the “Self” are neglected.



Figure 1: Change Agents – Synopsis of Case Study from the Area of Urban Development (modified from: WBGU, 2011, p. 258)

Therefore, I would argue, intentional communities may serve as useful “real life” examples –and not utopias- demonstrating fundamental transformative processes at both the personal as well as eventually reaching out to the collective socio-cultural level. Related to an “intentional” lifestyle, terms like postmaterialistic and postsecular (coined by Habermas) point towards an emerging new vocabulary signifying this shift in values and consciousness in Western societies.

In spite of these limitations, social pioneers and a new consciousness through values change are important aspects the WBGU report touches upon. Using the example of sustainable urbanization, the authors sketch how change takes place over a long time distinguishing conceptually between an innovation and production cycle and the various functions change agents can assume in these processes (WBGU, 2011, pp. 252-54; see Figure 1).

While the authors mention the role of “strategic consumers” and point out the potentials of change agents, “intentional communities” remain unexplored yet could be a source for further and more radical inspiration (Christian, 2003; Dierschke et al., 2006). The role of these could be spearheading new lifestyles, but too often they are viewed as social utopias even though in fact some of their ideas and practices are gradually entering wider society. Being a member of a community that consciously makes a decision in changing lifestyles encourages each individual member in actually living accordingly. This feeling of social support can be crucial to sustain decisions in living differently, since an obstacle for social pioneers is usually a permanent struggle with the conventional ways of living pursued by the majority.

Unfortunately, in many parts of the so-called emerging regions of the world we witness the exact opposite development as their development model relies heavily on carbon intensive path-dependencies - imitating the industrialized world - and hence is counterproductive in the sense that it carries elements destructive for a meaningful sustainable lifestyle.¹² For example, non-materialistic values and approach to life has been very strong in India for centuries if not millenia. Since the beginning of the politics of economic liberalisation in the early 1990s a considerable change due to economic growth gradually de-values formerly widespread virtues of frugality, leading a simple life and following a vegetarian diet. Even deeply rooted Hindu-Jain-Buddhist ethics of non-violence resulting often in a strict vegetarian diet are increasingly undermined by this spreading affluence with consequences for the global climate. Notes the report a known fact:

Apart from population growth, the most dynamic factor affecting land use, due to the huge differences in the emissions intensity of different foods, are changing eating habits. In industrialized countries, and increasingly, also in the high-income social classes of the newly industrialising and developing countries, the consumption of animal products, whose production involves significantly higher greenhouse gas emissions than purely plant-based agricultural commodities, is on the increase. (WBGU, 2011, p. 303)

Especially India - a country with one of the historically longest continuous and unbroken philosophical, religious and intellectual cultural traditions in the world-, one would reckon, does have the thought capacity to create its very own vision of development. Instead her leaders insist largely on the idea of catching up with the “developed” world as frequently argued during international negotiations on climate change, thus committing the same failures of modernity while at the same time submitting the country and its people unnecessarily to an inferior position rather than taking a bold lead by leapfrogging straight away to a low-carbon society¹³ (by consciously retaining those values which support more sustainable lifestyles). The spiritual township Auroville in India provides a formidable even though exclusive example of such an intentional, eco-spiritual community that can stimulate a rethinking of currently prevalent urban planning approaches (Acharya, 2012).

What we need eventually is people being inspired by a vision, a way of living, an ethical notion of life, which can be nurtured. It is already happening with many young urban dwellers across Germany and in many other countries who demonstrate a strong commitment to changing their lives, many of them also being influenced by Eastern spirituality or other, similar practices of self-inquiry, self-reflection and development. Hitherto there has practically been done no

¹² In India for instance, many spheres of life are affected by such kind of cultural ‘un-learning’, as the health sector illustrates: based on anecdotal knowledge/observation of the author, it appears that within the urban middle-class there is a widespread, almost blind belief in allopathic medicine and often disregard of Ayurvedic treatment methods, while in many ‘Western’ countries a shift towards a ‘complementary health perspective’ that integrates better the approaches of various health traditions (Chinese, Naturehealing, Ayurveda, allopathic, etc.) becomes more accepted (and is even included partly in the standard health insurance cover).

¹³ That a move in such a direction is not too farfetched has been demonstrated by the IT revolution in India which stands in a stark contrast to the abysmal poverty and human development indicators. Von Weizsäcker et al. (2009) discuss this option of low-carbon development as ‘tunneling through’ in their book ‘Factor Five’ in greater detail.

research on their role as social pioneers and the transformative force these individuals (and groups) may exert on urban society at large, even though they frequently make important decisions such as reducing their meat consumption or turning vegetarian/vegan altogether, shift from being car owners to using multiple mobility options, etcetera. Such steps are often only possible through a steady personal development and character building exercises – meditation, contemplation, yoga, self-reflexive trainings that develop a critical perspective not only on industrial food and its health implications but also ethical notion of the means of production. For example, during the past few years we witness a steady increase of critical TV documentaries and debates about conventional meat production and agriculture, food scandals, global textile production and climate change in Germany. But honestly, how many of us translate this information directly into their life praxis? This personal transformation needs a strong personality with convictions, a capacity that can be trained but is usually not part of our conventional, formal education. In this regard Jennifer Gidley's (2009) work on postformal pedagogies could be instructive probably even for urban community development and social work, including planning education.

Till date the urban planning professions and decision-makers have not found appropriate ways as to how to provide windows of opportunities that promote existing pro-active change agents or connect with phenomena like intentional communities and lifestyle transforming consciousness development. On the contrary, skepticism and suspicion from both sides frequently prevent interaction (Wilmsen, 2011, 2012). There is certainly a need for more research and open-minded practice as the WBGU points out: "It must be clarified what low-carbon city cultures and lifestyles might look like" (2011, p. 336). To this statement one may add "in different socio-cultural contexts" and a global process of cross-culturally learning from each other. Social pioneers and especially (urban) intentional communities might provide ideas to begin with. Since cities are usually considered places of innovation and creativity both in technological but also social and cultural terms, it is of crucial importance whether and how the urban development professions and disciplines are prepared to take into account and support these forces, especially in bringing to the fore the interior dimensions of socio-cultural transformation for sustainable urban development, an aspect I shall discuss now in the next section.

Urban Planning and Development: Moving from Inter- to Transdisciplinarity

The WBGU's focus on values and lifestyles in policy-making for climate change calls for a transformation of related professional fields and their praxis. Thus the previous discussion stimulates and encourages a profound review of current urban development practice, theory, policy making and training including a critical reflection on planning concepts, methods, and instruments. As a consequence of their assessment, the report's authors carve out "Ten Measure Bundles with Major Strategic Leverage" including "Bundle 6: Steering the World's Rapid Urbanisation towards Sustainability", which is considered as "an extremely effective lever that should be as high up as possible on the international political agenda." Given this significance, urban planners need to immediately review what implications this statement and the perspective brought forward in this report has in stock for planning practice. What are, for instance, the constraints and limitations of contemporary (post)modernist planning? To what extent are we prepared to incorporate the ideas and requirements of the great transformation?

One of the most stimulating areas of the report is its discussion on transdisciplinarity as a central concept for the implementation of and research for transformation, an area that builds on the increasingly recognized convergence of knowledge areas and global interconnectedness. Furthermore, the concept of transdisciplinarity also opens the door to link the WBGU with the ideas of integral approaches. Therefore this debate about transdisciplinarity should be of particular interest for the planning profession and education with its strong interdisciplinary orientation, but where transdisciplinarity can be viewed as complementary to interdisciplinarity. The WBGU's concept of transdisciplinarity focuses mainly on the aspect of including and involving social actors and stakeholders in identifying the research questions and conducting research:

Transdisciplinarity encompasses a range of different aspects. Firstly, it means increasing the social relevance of research questions through the involvement of stakeholders in setting research goals. Secondly, it also applies to the involvement of stakeholders in the actual research process, i. e., the combination of scientific and practical knowledge (for example local, traditional or indigenous knowledge). (WBGU, 2011, p. 323)

With this twofold notion of transdisciplinarity the link to social transformation is established. According to the WBGU's approach, for transdisciplinarity to be relevant in terms of inducing social transformation, the research needs to become part and being linked to society – it must be socially relevant - and simultaneously incorporate, acknowledge and honour local and indigenous ways of knowing. Building on their framework of transdisciplinarity as a methodology, the authors then present the interlinked *Four Transformative Pillars of the Knowledge Society*. As illustrated in Figure 2 and outlined in Table 1, these pillars consist of four mutually interdependent quadrants. They distinguish “transformation research” (Tr) as a form of research that studies processes of transformation from

“transformative research” (tR), whose aim is to induce and support transformation processes “including diffusion processes in economy and society, and opportunities for their acceleration, and demands, at least in part, systemic perspectives and inter- as well as transdisciplinary procedure methods, including stakeholder participation“ (WBGU, 2011, pp. 351-52). Consequently, education is considered as a requisite component for transformation to succeed. In a similar vein, education is divided in “transformation education” (Te) that critically reflects on the requisite basic requirements, such as a thorough understanding of the pressure to act and a global sense of responsibility” and also “communicates information on the environmental problems that necessitate the transformation” (WBGU, 2011, p. 352), whereas “transformative education” (tE) comprises the practical dimension of actual values and behavior change. This final step from awareness to action, which is crucial to “implement” and manifest the

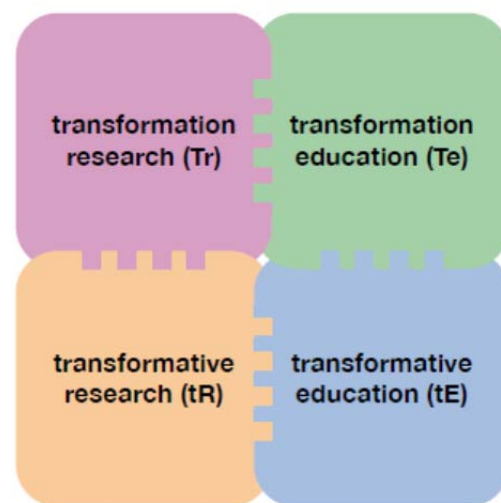


Figure 2: Typification of transformation research and education.

(Source: WBGU, 2011, p. 352)

transformation, is given not much room in the discussion of the WBGU, even though the authors are aware of the difficulties:

Knowledge appropriation is therefore the first precondition for transformation-supporting actions, it is, however, certainly not enough. For this reason, a quite justifiably recurring theme in the debate on sustainable development education is that education must not just be the communication of purely cognitive knowledge, but must also encompass, on the one hand, practical aspects which can be applied to actions and, on the other hand, competence building to enable those learning to reflect on their actions, and empowering them to shape their future. (de Haan, 2003; Rauchhaupt, 2005; WBGU, 2011, p. 354)

While the authors' of the WBGU report see the solution in the importance of participation in the research process and in activities such as a voluntary social/environmental year for young people, transformative practices of self-reflection and spiritual growth as practised in many wisdom traditions could be seen at least as a strong additional force that can aid in closing this gap by responding to the high demands of collective social transformation.

Table 1: Four Transformative Pillars of the Knowledge Society

<p><i>Transformation research (Tr)</i> Transformation research is aimed at understanding transformation processes better, its subject are therefore transformation processes as such. (p. 322)</p>	<p><i>Transformation education (Te)</i></p> <ul style="list-style-type: none"> - makes the findings of transformation research available to society - promotes systemic thinking, and generates a systemic understanding of different options for action - communicates information on the environmental problems that necessitate the transformation, and their scientific exploration. - it generates goals, values and visions to guide the actions of individuals towards the necessary direction. - <i>Te</i> should also have the goal of inspiring social participation and political action, as both are preconditions for a democratically legitimized transformation. (p. 352)
<p><i>Transformative research (tR)</i> Transformative research supports transformation processes in practical terms through the development of solutions and technical as well as social innovations, including economic and social diffusion processes and the possibility of their acceleration, and demands, at least in part, a systemic perspective and inter- and cross-disciplinary methods, including stakeholder participation (p. 322)</p>	<p><i>Transformative education (tE)</i></p> <ul style="list-style-type: none"> - generates an understanding of different options for action and solution approaches. - encouraging informed low-carbon mobility behaviour, sustainability-conscious eating habits, or an awareness of crossgenerational responsibilities. - Related educational content would be innovations that are likely to have transformative impact, or which have already had one. (p. 352)

Note: Source: WBGU 2011.

Returning to transdisciplinarity, the notion promoted in the report appears to be very similar to the concept of ‘action research’ or action planning which is rooted in a similar philosophy of knowledge for action and generated through the interaction with people concerned and other stakeholders. Action research also challenges the conventional way of knowledge-making and aims at creating a shift in the balance of power in favour of poor and marginalised groups in society. Reason and Bradbury (2001), for instance, point out the participatory dimension in co-creating knowledge mutually between the researchers and the people to generate “practical knowing” through action and reflection, theory and practice. Action research as a worldview thus encompasses a strong element to change or transform existing social realities. Indeed it is rooted in the same recognition of an emergent worldview as outlined above which “has been described as systemic, holistic, relational, feminine, experiential [...]” (Reason and Bradbury, 2001, p. 6). While in this sense participatory research connects well with the WBGU’s concept of transdisciplinarity, it also shows that the WBGU is not out of step with existing research designs or planning approaches. However, for transdisciplinarity to be more comprehensive, meaningful and to be a genuine, novel departure it must be a quite radical.

Insightful, additional meaning can be found in the radical treatment of transdisciplinarity by Nicolescu (2002) who explains “As the prefix trans indicates, transdisciplinarity concerns that which is at once between the disciplines, across the different disciplines, and beyond all discipline. Its goal is the understanding of the present world, of which one of the imperatives is the unity of knowledge” (Nicolescu, 2002, p. 44). According to him transdisciplinarity transgresses the duality of opposing binary pairs such as subject/object, subjectivity/objectivity, matter/consciousness, nature/divine, simplicity/complexity, reductionism/holism, diversity/unity (Nicolescu, 2002, p. 56). Crucially, transdisciplinarity seeks to break down traditional disciplinary boundaries and organise “knowledge around complex heterogeneous domains”. The prefix ‘trans’ signifies both the transgression of boundaries and the transcendence of disciplinary components. Essentially, in moving beyond disciplines, transdisciplinary research attempts to generate synergies and new types of knowledge (Riedy, 2007, p. 26).¹⁴ Transdisciplinarity with the goal to recreate integrated knowledge (Sommerville and Rapport, 2000) as an approach to research and practice seems to be a particularly suitable response to complex wicked problems like climate change – the reason why it has found some ground in environmental and sustainability research -, which cannot be treated by the application of fragmented disciplinary knowledge (Hoffmann-Riem, 2008).

In practice, whilst integrating knowledge is a crucial challenge it might even be inherently paradoxical because the growing number of integrative frameworks seems to trigger the need for a meta-theoretical perspective that integrates these itself, as Gidley’s work on Jean Gebser, Rudolf Steiner and Ken Wilber suggests. Naturally, if integration is concerned with unifying knowledge types, the question remains as to how multiple ontologies, epistemologies, methodologies, goals and practices of different stakeholders around a complex issue could be reconciled through transdisciplinary research and action. Unification must not be confused

¹⁴ In contrast, multidisciplinary research brings together the work of multiple disciplines operating in a relatively self-contained and independent manner. The integration across disciplines is limited to summation of findings. Interdisciplinary research goes further, seeking to integrate disciplinary perspectives on a particular problem to provide a systemic outcome, but disciplinary boundaries are not transgressed (Riedy, 2007, p. 26).

however, with equalizing knowledges in terms of brushing out difference and diversity. On the contrary, it is the attempt to capture the best possible holistic view by recognising and relating multiple, diverse, conflictive and contradictory perspectives on a problem that concerns many. In current urban and regional planning activities - by way of various methods of participation and stakeholder consultations - the reconciliation of conflicts, balancing and weighting of diverse interests is usually a central objective during the development and policy formulation process. If such a process is well guided and intended, it is frequently through this process itself that stakeholders change, adapt and maybe even transform.¹⁵ This includes the consideration of various types of knowledge (expert, phenomenological, experiential, anecdotal, indigenous), but rarely interiority. For example, recent research in Australia where formalised planning practice meets the cognitive-mental structures of Aboriginal landscape perceptions indicates that the planning community there becomes increasingly aware of the shortcomings of their established methods and concepts feeling a need to relate to and accommodate indigenous knowledge especially paying attention to spiritual dimensions (Low Choy et al., 2010). It is for this reason that contemporary planning theory, as I will outline further below, has incorporated ideas like Habermas' theory of communicative action.

Another dimension not considered in the WBGU report is that a transdisciplinary perspective would certainly be enriched if it was opened for active exchange of ideas across knowledge systems and cultures such as including wisdom traditions of the East.¹⁶ Such an expanded and more comprehensive view of transdisciplinarity is proposed by Nicolescu whose interpretation of transdisciplinarity implies its being transcultural, transhistorical, transpolitical, or with Wilber's Integral Theory that seeks to integrate (acknowledge) knowledge diachronically throughout history and synchronically from 'East' and 'West', perennial philosophies and the sciences. Compared to these approaches, conventional 'Western' academia is primarily self-satisfied, self-contained and locked in its own history of thought rarely incorporating knowledge from other philosophical and cultural traditions, even though the epistemological learning potential would be tremendous.¹⁷ For example, the introduction of Gross National Happiness in Bhutan, which is based on Buddhist values, led to a revival or (re)discovery of this concept within international development discourse and practise. Within the climate change debate a focus on knowledge and

¹⁵ Another issue concerning participatory processes that cannot be discussed here in detail but is certainly relevant is inclusion or in negative terms marginalization/exclusion. A large body of literature can be found around issues of oppression, social exclusion, injustice and inequality in participatory processes (e.g. Beckmann, 1997; Cooke & Kothari, 2001; Young, 1990)

¹⁶ The reference to 'indigenous knowledge' made in the report is insufficient, as it seems to refer more to 'local' knowledge and tribal groups. Certainly, one would not think of the complex philosophical traditions of China or India and other countries being 'indigenous'.

¹⁷ For instance, even Nobel laureate Amartya Sen takes an almost apologetic stance in his recent treatment on the idea of justice when he points out that his approach also draws from ancient Indian resources, writing "...the connection of this work with the European Enlightenment does not make the intellectual background of this book particularly 'European'. Indeed, one of the unusual –some will probably say eccentric – features of this book compared with other writings on the theory of justice is the extensive use that I have made of ideas from non-Western societies, particularly from Indian intellectual history, but also from elsewhere. [...] In confining attention almost exclusively to Western literature, the contemporary – and largely Western – pursuit of political philosophy in general and of the demands of justice in particular has been, I would argue, limited and to some extent parochial" (Sen, 2009, pp. xiii-xiv).

technology transfer from the advanced industrial countries to the developing world is usually emphasized. While the developing world shows a keen interest in receiving the latest technology, they also point out in the same breath that financial assistance is required thus reinforcing political dependence. On the other side, one may view such an approach as a new kind of imperialism or even paternalism where in fact there may be tangible advantages for mutual learning based on knowledge exchange. Hence a transdisciplinary approach needs to be receptive to a global exchange of knowledge types, including in particular the domain of interiority/spirituality (Salemink, van Harskamp & Giri, 2004; Santos, 2007). Western urban planning, being by and large a modernist rational decision-making process, has almost no room for this knowledge area. As noted, with the beginning of the 21st century, however, some planning professionals and academics have noticed a resurgence of religiosity and spirituality in public urban life (metroZones, 2011; Beaumont & Baker, 2011), and others, including myself, are working towards a “recognition of the spiritual” within the planning discipline (e.g., Anhorn, 2006; Sandercock & Senbel, 2011; Wight, 2009; Woiwode, 2012c; Woiwode & Scholz, 2012).

Overall, the previously outlined features of transdisciplinarity pose a major departure from the currently prevailing logic of modernist planning practices in many parts of the world, which are nearly without exception the legacy of the European colonial and imperialist hegemony. Modernist planning approaches are problematic in many ways (UN-Habitat, 2009, pp. 58-59), but above all they are “weak in terms of how to deal with the major issues of the 21st century: climate change, resource depletion, rapid urbanization, poverty and informality” (UN-Habitat, 2009, p. 70). Thus “a significant practical dilemma that faces planners – as well as other urban professionals and politicians – when they try to implement sustainable urban development is *how to integrate the two different sets of concerns of the “green agenda” and the “brown agenda”* (i.e. the natural environment and the human environment)” (UN-Habitat, 2009, p. 114; emphasis added; see Table 2). Even though spatial planning is considered an interdisciplinary exercise, the frustration of above statement illustrates the “interdisciplinary dilemma” that the partaking disciplines are not adequately integrated, i.e. brought into a meaningful relationship. Apparently, this approach falls short of being integral for example in terms of the multi-dimensional model as developed by Wilber, nor is it transdisciplinary by Nicolescu’s criteria as previously discussed. In Wilberian terminology, it rather is a purely systemic (natural and social systems), exterior objective perspective, which is certainly valuable but insufficient. The entire vocabulary in this UN-Habitat report is one of a bio-physiological system, where a city’s metabolism defines its ecological footprint. The cultural (values and worldviews) as well as the psycho-spiritual (subjective aesthetics) dimensions that underlie the expression of this metabolism are rarely mentioned (for instance ethical considerations).

Table 2: Characteristics of the Green and Brown Agendas in the Urban Environment

The green agenda	The brown agenda
Natural systems, global, regional and local, used as services by cities	Human systems required to make cities healthy and livable and which are part of the metabolism of the city
Ecosystems that provide green open space used by the city for biodiversity protection and recreation.	Waste systems to recycle and remove wastes from cities, including solid, liquid and air waste.
Water systems that cities use to tap the natural flow of water supply and waste disposal.	Energy systems to provide power, heating, cooling and lighting for all city functions.
Climate and air systems that provide cities with the requirements for healthy life.	Transport systems to enable mobility in the city, including the fuel.
Other ecological services, including agricultural and forestry systems providing food and fibre for cities.	Building and materials systems that provide the physical basis of life in cities.

Note: Source: UN-Habitat, 2009, p. 114.

As demonstrated in Table 3, even without considering climate change as a severe problem, urban development faces a wide range of issues at the global as well at the regional level. Since these are interdependent and interwoven in complex relationships and systems, hence the urgent need for a meta-theoretical, integral perspective which enables the application of a transdisciplinary perspective to urban development planning. Conventionally, in the field of urban and spatial planning, various measures are called integrated, for example “integrated neighbourhood management” or “integrated urban development”. Inherent to these types of integration is the connotation of comprehensive planning that refers to the notion of considering combined socio-economic aspects, land use planning and management, governance/stakeholder consultations, etc. For instance in terms of climate change, the city is viewed as an (open) system that integrates among others demography, economy, land use, climate impacts and greenhouse gas (GHG) emissions (e.g., Hall et al., 2010). Additionally, ‘integrative’ or ‘integrated’ means also ‘multi-sectoral’¹⁸ referring to the correlation of several selected variables as in the model of Boydell et al.¹⁹ (2010). These approaches are obviously not “integral” in Wilber’s terms nor do they step out and move beyond a coordinative relationship of the various disciplines involved, in practice being compartmentalized implemented by local, regional or national government departments. Instead they reflect a systemic understanding of objective reality and facts that consider reduction of CO2 emissions in terms of more greening, energy efficiency, transport, and other areas without including behavioural and consciousness, or cultural patterns. Nearly all urban climate change initiatives whether in developed or developing countries reflect this limited notion of socio-technical response to socio-technical systems (see e.g., BBSR, 2009; Martin et

¹⁸ Exemplary sectors are: transport, open spaces & greenery, environment, economy, social infrastructure like schools or health centres, technical infrastructures like storm water drainage or sewerage systems, housing, industries, leisure facilities, disaster management, land use planning, etc.

¹⁹ This model integrates urban residential water consumption, passenger transport, and in-house energy use.

al., 2008; UN-Habitat, n/d), confirms the WBGU's assessment of the research landscape on urban climate change in Germany:

Particularly the cultural aspects, which – as they determine innovation acceptance and diffusion and consumption behaviour – are central to the transformation success, are not sufficiently taken into account in the programmes, or not explicitly mentioned. It is therefore to be expected that although cultural aspects will impact somewhat as a consequence of international cooperation, the targeted generation of relevant data and their comparability is being neglected. (WBGU, 2011, p. 345)

Table 3: Main issues for urban planning in different parts of the world

Region	Issues
<i>Global</i>	<ol style="list-style-type: none"> 1. Climate change 2. Global economic crisis 3. Energy supply and impacts 4. Food security 5. Changing population size of towns and cities 6. Income inequality 7. Cultural diversity
<i>Developing countries</i>	<ol style="list-style-type: none"> 1. Urban informality 2. Urban growth 3. Income inequality and poverty 4. The “youth bulge” 5. The peri-urban areas 6. Linking the green and brown agendas 7. Institutional and professional capacity
<i>Transitional countries</i>	<ol style="list-style-type: none"> 1. Slow population growth and declining cities 2. Urban sprawl, fragmentation and inequality 3. Environmental issues 4. Decentralization of government and resource constraints 5. The changing legislative framework for planning
<i>Developed countries</i>	<ol style="list-style-type: none"> 1. Socio-spatial inequalities and urban fragmentation 2. Environmental issues 3. Population decline and shrinking cities 4. Integrating sectoral policy within governments

Note: Compiled from UN-Habitat, 2009, pp. 201-205)

Conclusion: How could an Integral, Transdisciplinary Response to Urban Climate Change Look Like?

This section aims to move beyond mere abstract and theoretical criticism of an otherwise important policy paper to stimulate a discussion about a research agenda on urban climate change response that is inspired and framed by an integral, transdisciplinary, meta-theoretical approach.

It is therefore not an exhaustive, nor a conclusive or comprehensive treatment of the subject matter, but work in progress directly relating to a series of other articles that I have written on this topic (Woiwode, 2012a, 2012b, 2012c). I subsequently cover briefly two issues, first in providing a glimpse of contemporary planning theories to indicate the potential for creating a planning (meta-)theory with an integrative, transdisciplinary face, and secondly by pinpointing to some issues relevant for a research agenda.

Meta-theory, Transdisciplinarity, and Contemporary (Urban) Planning Theory

No one has hitherto attempted to introduce a meta-theoretical, integral approach to urban planning theory. Currently the application of complexity theory is one of the latest answers of planning theorists and practitioners to the challenges of the 21st century (Chettiparamb, 2008), which are identified as uncertainty, insurgence, complexity and wildness (Healey & Hillier, 2008, p. 405). In its effort, this stream of planning theory follows the same line of the “new physics” and “new life sciences” in their critique of science and the Cartesian worldview by attempting to explicitly reconnect science, philosophy and humanity. It is further noted that there is an “incongruence between the actual urban “reality” which is complex and non-linear and the application of linear rationalist planning methods” (McAdams, 2008, p. 2). If we look further back we discover that in the 1990s planning theory was marked by the postmodern “communicative turn” known eventually as collaborative planning. Drawing from other disciplines like social anthropology (particularly Clifford Geertz) and critical theory (the Frankfurt School as represented by Jürgen Habermas) this stream incorporates more explicitly the cultural, creative dimensions in planning and policy making. On the surface it seems to come close to an integral framework because the field of planning theory expanded its scope into the intersubjective and, partially, subjective dimensions (Forester, 1989; Healey, 1992, 1996, 1997; Innes, 1998; Sager, 1998). Planning was now given an interpretive phenomenological perspective thus challenging the founding epistemologies of planning theory – instrumental rationality of modernist planning. Modernist planning, characterized by knowledge constructed predominantly through techno-scientific analysis and deductive logic, is the domain of experts, excluding other types of knowledge and value systems such as experiential, local, intuitive, tacit, expressive “knowledges” which draw on moral and aesthetic realms rather than on scientific logic and empiricism.

This notwithstanding, these more recent postmodern efforts still stop short of a more genuine meta-theoretical perspective, for Habermasian theory²⁰ at that stage remained a secular undertaking without giving room to the religious or spiritual realm of subjective interiority, whilst the notion of complex systems is still essentially confined to an objective perspective on the world and therefore largely incapable to capture the subjective dimensions of reality. The blind spot of planning practice and theory, the subjective, psycho-spiritual, emotional dimensions, is hardly touched upon. One exception in this regard is Sandercock (2008) who fosters “a therapeutic approach” to planning that explicitly values the emotional side of human relationships like fear, anger, hope, betrayal, abandonment, loss, lack of recognition, histories of disempowerment and exclusion. Significantly, as the root of the neglect of emotions in planning

²⁰ It is not before the beginning of the 21st century that Habermas began to emphasise the relationship between reason and faith acknowledging the emergence of a postsecular society (see Habermas, 2001 and 2010).

she identifies the divide between reason and emotion. Indeed it is Sandercock (2006, p. 65) who drives her own point of including emotions further into the interior spheres towards the recognition of spirituality:

The work of urban, social, community, environmental, and even land-use planning is fundamentally a work of hope [...]. But where does this hope come from, if not from some kind of faith? Hence I must ask myself, and my profession: are we not missing something important by not talking about this thing at the heart of planning that marks us all as at least closet utopians? The faith at the heart of planning is very simple. It's our faith in humanity, in ourselves as social beings, in the presence of the human spirit and the possibility of realizing/ bringing into being the best of what it means to be human.

Sandercock laments the sterile terms planning professionals use to describe their work which would make it incomprehensible to the people. She stresses the need to talk about planning in a different way. We need to recognise that spirituality may be embodied in planning work, and if so "It would mean a different way of seeing ourselves, representing ourselves to the world, and it would necessarily lead to different ways of teaching, which we might begin to think of as 'educating the heart'" (Sandercock, 2006, p. 66).

In summary, this tour de force through more recent planning theories demonstrates that planners and planning theory have been receptive to the postmodern paradigm of the social sciences, but an attempt to transcend these towards generating a transdisciplinary, integral framework which reflects contemporary integral thinking with its spiritual elements emphasising potentials of personal psycho-spiritual growth, the application of transformative practices like contemplation or meditation, and its emotional empathic aspect of developing all-embracing love and compassion is not in sight as yet.

Brief Outline of an Integral, Transdisciplinary Research agenda Focusing on Climate Change, Urban Planning and Development

My own as well as the WBGU's analysis of the present predominant perspectives on climate change demonstrate an inadequate overemphasis on the technical, scientific, objective approach to climate change by a simultaneous neglect of subjective and inter-subjective dimensions. Similarly turns out the evaluation of the two related fields of study, urbanization and development. Social, human development in urbanization studies and in urban development usually does not establish the link between existential (spiritual) and other interior dimensions of human life. On the other hand, transdisciplinary, meta-theoretical, integral approaches as understood in this essay acknowledge, appreciate and work with diverse epistemologies and ontologies. Hence an integral meta-theory seems to offer a way to address and transcend several of the limitations of mainstream approaches in the fields of climate change and urban development. Till date integral thinking offers much in theory, but its practical applications are only gradually beginning to be explored. Obviously part of the challenge lies in translating theory into practice. One obstacle is that professional planners who desire to apply the insights of a meta-theoretical framework such as Integral Theory in their work need to become scholar-practitioners in order to enable them to incorporate the neglected interior dimensions of emotions, spirituality and personal inner growth. As I have pointed out elsewhere:

This is about learning a new “language”, the language of introspection, of self-analysis, of looking inwardly in order to consciously act according to the notions and values of interdependence and connectivity, love and compassion. It involves practises planners are usually not so familiar with and have normally not received any training in, i.e., addressing the interiority of our existence, the aesthetics of being, the art of living. [...] Likewise, urban planning practitioners need to build their own consciousness and personal transformative practises (prayer, contemplation, meditation, psychotherapy, introspection) in order to be capacitated to work with and address interior dimensions of development when working with other people. In our planning education, we have learned to study objective facts, say, of the built environment; over time, we have also recognised the inter-subjective dimensions of participation and the cultural realm of meaning making, but we are not trained in the subjective language of human interiority. Emotions, feelings, and spirituality are not (yet) part of a standard planning curriculum. (Woiwode, 2012b, p. 56)

Understanding interiority of the self can only be attained fully through self-experience as emphasized by Anhorn (2006) in the field of urban planning and Hochachka (2005) for international community development. Practitioners need to be educated and trained to enable them applying theory into practice:

As practitioners begin to recognize this integration is critical, a question that many of us have is: how do we work with interiority, and more specifically interior development? Just as we are becoming more and more aware of the need to engage interiority, we are also becoming aware that we may not have the tools or the training to do so. Many have been trained in scientific and/or quantitative actions, and process-oriented, participatory methodologies, but fewer have the tools for engaging the interior and psychological aspects of human reality. (Hochachka, 2006, p. 12)

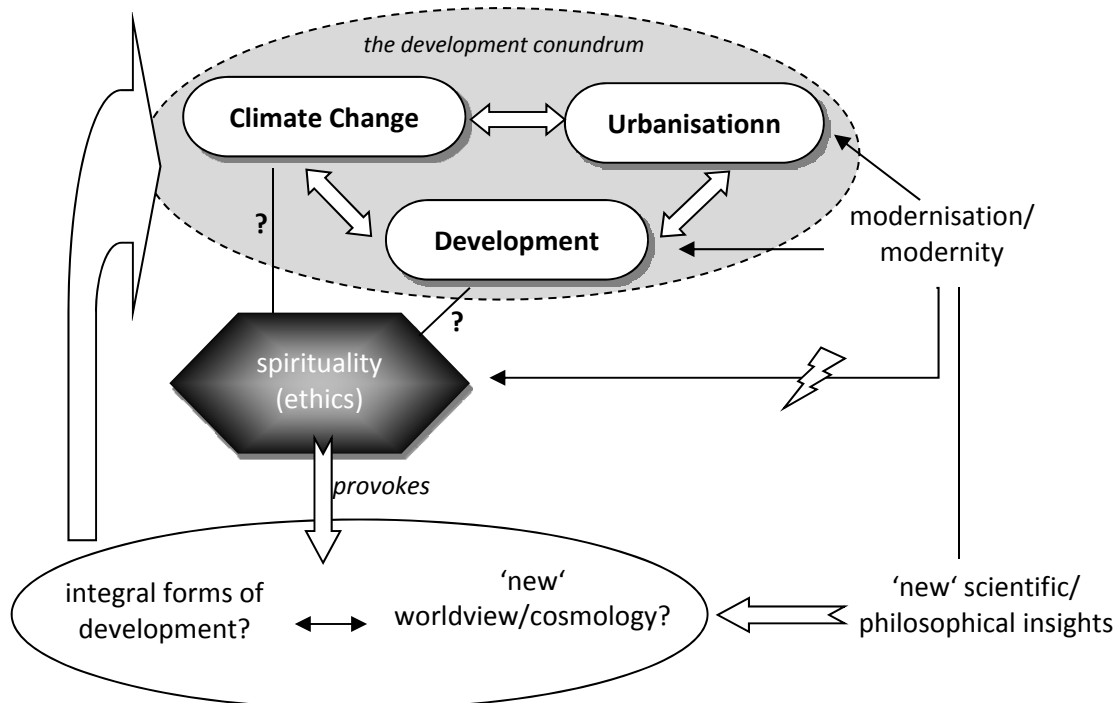


Figure 3: The Central Research Arguments and Assumptions

The argument and underpinning assumptions advanced here are visually condensed in the diagram (Figure 3). Accordingly, the core problem is posed by the interdependently occurring and mutually reinforcing processes of urbanization, development and climate change. This triangle may be called “the development conundrum”. In this understanding urbanization and the notion of development are both causes and drivers of modernization, they are, just like industrialization and rational thought, part of what is commonly understood as “modernity”. As highlighted in this paper, this process resulted in a rigid separation of science and spirituality/religion, with the former rising to become the sole perspective of interpreting reality, the universe and everything else, and the latter being exiled in the name of secularity from academic discourse and the practice of life. In response to this development of epistemologies, the critique of science (actually on “scientism”) and modernity coupled with advances in quantum physics resulted in “new” scientific insights (e.g., complexity and chaos theory), endeavours in recognizing the “Tao of Physics” by combining Western knowledge and Eastern wisdom which subsequently gave rise in the past 30 years to contemporary integral thinking that attempts to reconcile the schism of matter and mind. Eventually, these new scientific and philosophical insights - so it is assumed and expected and hoped - will trigger a new understanding of the world, a new cosmology. It is at this point where the confluence of spirituality and the spectrum of development are situated, already working on re-conceptualising development as a more holistic, i.e. integral, notion of human development. In this respect I (Woiwode, 2012) have suggested that we may view the human condition as a composition of at least three different types of human nature relevant in each lived situation, that is, humans are (a) “zoon politikon”: a political, socio-cultural being, (b) “homo economicus”: an economic, rationally acting being, and (c) “homo spiritualis”: an emotional, psycho-spiritual being. Each of these three dimensions can be related to the developmental capacities represented in the notion of “capital”: (a) social, cultural/symbolic capital as found in Putnam’s and Bourdieu’s writings, (b) physical/financial capital as in classic economic texts, and (c) religious/spiritual capital as recently suggested by Baker (2009) but prominent for much longer in anthropological studies (e.g., Woiwode, 2001). Finally, the feedback of this reformulation of development as informed by a spiritual and integral worldview will be positive on the triangle of the “development conundrum”.

On this basis, with special reference to the context of addressing urban climate change we may consider the following thematic focus areas and major research questions:

1. *Urban Governance and Communication*: Indispensable is the inherent aspect of communication when Integral Theory is applied to resolving real world issues such as climate change, environmental problems, urban development, and development in general.²¹ At this point I can draw on earlier research I carried out in the area of urban risk communication (Woiwode, 2007, 2008, 2009). A research focus on urban governance approaches seems a logical conclusion: communication of diverse perspectives, rationalities, types of knowledge (includes public participation); initial ideas on integral governance are brought forward by McIntosh (2002, pp. 311-23; even though he focuses

²¹ For instance, Esbjörn-Hargens & Zimmerman (2009, pp. 2-4) provide a case study on negotiating a solution to protect a rain forest. They write: “As we will see, integral capacities refer in part to the ability to cease exclusive identification with a particular position, such as modern (industrial logger) or postmodern (green environmentalist), and start sympathizing with multiple perspectives and realities.”

- on global governance) and Hamilton (2008, pp. 173-77). Moreover, good urban governance is generally viewed as a key to urban climate change resilience (Tanner et al., 2008), but apparently current governance structures and the institutional culture of most cities are inadequate to address the challenge of climate change adaptation and mitigation (Revi, 2008). The resulting question would be: *What are the implications of an integral approach for urban governance to address climate change?*
2. *Poverty, Exclusion and Social Justice*: Another focus within the urbanization and climate change link is their relationship to some of the most pressing issues of development such as poverty, inclusion/exclusion, and social/environmental justice; this means in the urban environment a focus on slum and squatter settlements, pavement dwellers and similarly marginalized urban populations. The resulting question would be: *How do poor/marginalised urban dwellers relate to climate change risks in the context of their own development prospects?*
 3. *Several holarchical layers in the urban context* of tackling climate change seem appropriate and relevant for further research: links between neighbourhood/ community, borough, municipality, NGOs, and national policy level need to be studied. The resulting questions would be: *What are the epistemological and ontological standpoints of urban stakeholders?(Which perspectives on climate change and development are prevalent among these groups? How are they created and why are they created in their specific ways? How does their knowledge connect to their values and worldviews?)*
 4. *The role of planning professionals and local politicians* (their “integral” self-development) in the process of climate change adaptation/resilience/mitigation and consequences for urban management and planning capacities. The resulting questions would be: *Of what kind are the planning/decision making cultures in the country/ies under study? Which are the consequences of a meta-theoretical, integral notion of climate change, urbanization and development for planning education and capacity building?*

Other, more profound, generic and cross-cutting research questions are the following.

1. How does a transdisciplinary, integral approach relate to the fields of urban development, climate change and (international) development in theoretical and methodological terms? And how do they relate to each other within such a framework?
2. What is the relationship between an urbanized humankind - the city dwellers - to nature and the cosmos? In which way can an integral perspective (re)define environmental ethics through consciousness transformation and is it feasible to include this in urban development practice?
3. What is spirituality? And what is the role of spirituality/ the interior dimension for urban societies and in urban development? How could it be integrated with urban development practice and how do the urban stakeholders relate to it?
4. Following question c): Climate change inevitably evokes questions about “the urban life”, well-being and quality of life, the notions and relation of materialistic versus immaterial development dimensions? How does the developmental perspective of integral theories (re-)define consumption, the use of resources, poverty and quality of life?

In conclusion, it is this fact of highlighting the dimension of values and worldviews as central for a social transformation in the climate change discourse that renders the WBGU report such a significant policy paper. For in doing so it points towards a more profound effort in addressing

climate change by simultaneously drawing attention to pivotal disciplines such as urban planning. However, its scope does not permit an in-depth treatment as to how some of the particular areas such as urban development can be reformed and adjusted to these contemporary demands. Planners, academics and related professionals are thus faced with the task ahead of identifying how transdisciplinary and integral perspectives may become part of planning theory and above all planning practice. Even though this is still in an embryonic stage and remains an enormous challenge – especially in terms of upscaling and promoting such an approach at international events like the United Nations Conference on Sustainable Development Rio+20 and in multinational organizations such as the UN -, initial steps have been taken by individual scholars, practitioners and international initiatives like the Earth Charter Cities Manifesto towards understanding the city in a more integral fashion as indicated in the quote at the beginning. In this light, the research agenda as outlined in the final section of this paper is an invitation to build on and to inspire new ideas on this subject.

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References

- Acharya, A. S. (2012). Town planning for transforming India into a "right kind of giant" – A study in Sri Aurobindo's light. *Dialog* 107, Issue IV/2010 (published 04/2012), 39-47.
- Anhorn, M. R. (2006). Spirituality and planning in a diverse world. *Planning Theory and Practice*, 7 (1), 68-80.
- Beaumont, J. & Baker, C. (Eds.), (2011). *Postsecular cities: Religious space, theory and practice*. London and New York: Continuum.
- Beckmann, G. (1997). *Partizipation in der Entwicklungszusammenarbeit. Mode, Methode oder politische Vision?* ("Participation in development cooperation: Fashion, method or political vision?"). Hamburg: Lit.
- Benedikter, R. & Moltz, M. (2012). The rise of neo-integrative worldviews: towards a rational spirituality for the coming planetary civilization?. In Hartwig, M. & Morgan, J. (Eds.), *Critical realism and spirituality* (pp. 29-74). London and New York: Routledge.
- Bhaskar, R. (2002). *Reflections on meta-reality: Transcendence, emancipation and everyday life*. New Delhi, Thousand Oaks, London: Sage.
- Bhaskar, R., Frank C., Hoyer, K. G., Naess, P. & Parker, J. (Eds.), (2010). *Interdisciplinarity and climate change: Transforming knowledge and practice for our global future*. London and New York: Routledge.
- Boydell, S., Giurco, D., Rickwood, P., Glazebrook, G., Zeibots, M. & White, S. (2010). Using an integrated assessment model for urban development to respond to climate change in cities. In Bose, K. R. (Ed.), *Energy efficient cities: Assessment tools and benchmarking practices* (pp. 65-92). Washington, D.C.: The World Bank.

- Bundesinstitut für Bau-, Stadt- und Raumforschung (BBSR) Bundesministerium für Verkehr, Bau und Stadtentwicklung (BMVBS), (2009). *Entwurf eines regionalen Handlungs- und Aktionsrahmens Klimaanpassung („Blaupause“)*. BBSR-Online-Publikation, Nr. 17/2009. Retrieved 10 June 2010, from http://www.bbsr.bund.de/nn_23582/BBSR/DE/Veroeffentlichungen/BBSROnline/2009/ON172009.html
- Chettiparamb, A. (2008). Metaphors in complexity theory and planning. In Hillier, J. & Healey, P. (Eds.), *Contemporary movements in planning theory: Critical essays in planning theory*, Vol. 3 (pp. 465-85). Aldershot: Ashgate.
- Christian, D. L. (2003). *Creating a life together: Practical tools to grow ecovillages and intentional communities*. Gabriola Island, BC: New Society Publishers.
- Cooke, B. & Kothari, U. (Eds.), (2001). *Participation: The new tyranny?* London: Zed Books.
- Combs, A. (1996). *The radiance of being: Complexity, chaos and the evolution of consciousness*. St. Paul, Minnesota: Paragon House.
- Dierschke, T., Drucks, S. & Kunze, I. (2006). Intentionale Gemeinschaften: Begriffe, Felder, Zugänge [Intentional communities: Terms, fields, approaches] (pp. 101-118). In: Grundmann, M., Dierschke, T., Drucks, S. & Kunze, I. (Eds.), *Soziale Gemeinschaften. Experimentierfelder für kollektive Lebensformen*. Berlin: Lit.
- Edwards, M. (2010). *Organisational transformation for sustainability: An integral metatheory*. London: Routledge.
- Esbjörn-Hargens, S., & Zimmerman, M. E. (2009). *Integral ecology: Uniting multiple perspectives on the natural world*. Boston & London: Integral Books.
- Forester, J. (1989). *Planning in the face of power*. Berkeley; London: University of California Press.
- Gidley, J. (2007). The evolution of consciousness as a planetary imperative: An integration of Integral Views. *Integral Review* Issue 5, 4-226.
- Gidley, J. (2008). *Evolving education: A postformal-integral-planetary gaze at the evolution of consciousness and the educational imperatives*. Doctoral thesis, Southern Cross University.
- Gidley, J. (2009). Educating for evolving consciousness: Voicing the emergency for love, life and wisdom. In de Souza, M., Francis, L. J., O'Higgins-Norman, J. Scott, D. (Eds.), *International handbook of education for spirituality, care and wellbeing* (pp. 533-561). Dordrecht, Netherlands: Springer.
- Habermas, J. (2001). *Glauben und Wissen. Friedenspreis des Deutschen Buchhandels 2001*. Frankfurt am Main: Suhrkamp.
- Habermas, J. (Ed.), (2010). *An awareness of what is missing: faith and reason in a post-secular age*. Cambridge: Polity.
- Hall, J. W., Dawson, R. J., Barr, S. L., Batty, M., Bristow, A. L., Carney, S., Dagoumas, A., Ford, A. C., Harpham, C., Tight, M. R., Walsh, C. L., Watters, H., Zanni, A. M. (2010). City-scale integrated assessment of climate impacts, adaptation, and mitigation. In Bose, K. R. (Ed.), *Energy efficient cities: Assessment tools and benchmarking practices* (pp. 43-64). Washington, D.C.: The World Bank.
- Hamilton, M. (2008). *Integral city: Evolutionary intelligences for the human hive*. Gabriola Island (Can.): New Society Publishers.
- Hansen, T. B. (2004). *The saffron wave: Democracy and Hindu nationalism in modern India*. New Delhi: Oxford University Press India.
- Healey, P. (1992). Planning through debate: The communicative turn in planning theory. *Town Planning Review*, 63(2), 143-162.

- Healey, P. (1996). The communicative turn in planning theory and its implications for spatial strategy formation. *Environment and Planning B: Planning and Design*, Vol. 23, 217-234.
- Healey, P. (1997). *Collaborative planning. Shaping places in fragmented societies*. London: Mcmillan.
- Healey, P. & Hillier, J. (2008). Introduction to part III. In Hillier, J. & Healey, P. (Eds.), *Contemporary movements in planning theory: Critical essays in planning theory*, Vol. 3 (pp.405-411). Aldershot: Ashgate.
- Heelas, P. & Woodhead, L. (2005). *The spiritual revolution: Why religion is giving way to spirituality*. Oxford: Blackwell Publishing.
- Hochachka, G. (2005). *Developing sustainability, developing the self: An integral approach to international and community development*. Drishti Centre for Integral Action. Online available from www.drishti.ca.
- Hoffmann-Riem, H., Biber-Klemm, S., Grossenbacher-Mansuy, W., Hirsch Hadorn, G., Joye, D., Pohl, C., Wiesmann, U., Zemp, E. (2008). Idea of the handbook (pp. 3-17). In their (Eds.) *Handbook of transdisciplinary research*. Berlin: Springer.
- Homer-Dixon, T. F. (2006). *The upside of down: Catastrophe, creativity, and the renewal of civilization*. Washington: Island Press.
- Innes, J. E. (1998). Information in communicative planning. *Journal of the American Planning Association*, 64(1), 52-63.
- Jaffrelot, C. (1999). *The Hindu nationalist movement and Indian politics: 1925 to the 1990s*. New Delhi: Penguin Books India.
- Knoblauch, H. (2009). *Populäre Religion: Auf dem Weg in eine spirituelle Gesellschaft* [Popular religion: towards a spiritual society]. Frankfurt am Main: Campus.
- Low Choy, D., Wadsworth, J. & Burns, D. (2010). Incorporating indigenous landscape values into regional planning. Research Monograph 13, Urban Research Program, Griffith University, Brisbane. Retrieved October, 28, 2011, from http://www.griffith.edu.au/_data/assets/pdf_file/0020/277022/urprm13-low-choy-et-al-2011.pdf
- Martin, V. Eckert, R., Schmidt, M., Storch, H. (2008). Integrative Stadtentwicklungs- und Umweltplanung zur Anpassung an die Folgen des globalen Klimawandels in Ho Chi Minh City – Anpassungsstrategien für eine klimagerechte und energieeffiziente Stadtentwicklung und Wohnungsversorgung. *Forum der Forschung* 21, 111-118.
- Max-Neef, M. A. (1982). *From the outside looking in: Experiences in 'barefoot economics'*. Uppsala, Sweden: Dag Hammarskjöld Foundation.
- Max-Neef, M. A. (1991). *Human scale development: Conception, application and further reflections*. New York: Apex Press.
- McAdams, M. A. (2008). *Complexity theory and urban planning*. Retrieved 13 January 2010, from www.tamuk.edu/geo/urbana/spring2008/mcadams.pdf
- McIntosh, S. (2007). *Integral consciousness and the future of evolution: How the integral worldview is transforming politics, culture and spirituality*. St. Paul, MN: Paragon House.
- metroZones (Ed.), (2011). *Urban prayers: Neue religiöse Bewegungen in der globalen Stadt* [Urban Prayers: new religious movements in the global city]. Hamburg, Berlin: Assoziation A.
- Mohrmann, R.-E. (Ed.), (2010). *Alternative Spiritualität heute* [Alternative spirituality today]. Münster/New York/München/Berlin: Waxmann.
- Nicolescu, B. (2002). *Manifesto of transdisciplinarity*. Albany, NY: SUNY Press.

- O'Brien, K. (2009). Responding to climate change: The need for an integral approach. Integral Institute, Resource Paper No. 4, 1–12. Retrieved 4 May 2009, from: http://www.dialogue4health.org/pdfs/3_18_09/OBrien_Climate_Change.pdf
- O'Brien, K. & Hochachka, G. (2010). Integral adaptation to climate change. *Journal of Integral Theory and Practice*, 5(1), 89-102.
- Rahnema, M. (Ed.), (2005) [1997]. *The post-development reader*. London and New Jersey: Zed Books.
- Reason, P. & Bradbury, H. (2001). Introduction: Inquiry and participation in search of a world worthy of human participation (pp. 1-14). In their (Eds.) *Handbook of action research*. London: Sage.
- Reynolds, B. (2006). *Where's Wilber at? Ken Wilber's integral vision in the new millenium*. St. Paul, MN: Omega Books.
- Revi, A. (2008). Climate change risk: An adaptation and mitigation agenda for Indian cities. *Environment and Urbanization*, 20(1), 207-229.
- Riedy, C. (2007). *The eye of the storm: An integral perspective on sustainable development and climate change response*. Saarbrücken (Germany): VDM.
- Rist, G. (2002). *The history of development: From western origins to global faith*. New York: Zed Books.
- Sachs, W. (Ed.), (2005). [1992] *The development dictionary*. London: Zed Books.
- Sager, T. (1998). Meaningful collective choice? *Progress in Planning*, 50, 75-140.
- Salemink, O., van Harskamp, A. & Giri, A. K. (Eds.), (2004). *The development of religion/The religion of development*. Delft: Eburon.
- Sandel, M. (2009). A new politics of the common good. 2009 Reith lectures "The new citizenship", 4th Lecture, June. London: BBC. Retrieved 20 March 2012, from http://www.bbc.co.uk/worldservice/specialreports/2009/06/090612_reith_lectures_2009.shtml
- Sandercock, L. (2006). Spirituality and the urban professions: The paradox at the heart of planning. *Planning Theory and Practice*, 7(1), 65-67.
- Sandercock, L. (2008). Towards a planning imagination for the 21st century. In Hillier, J. & Healey, P. (Eds.), *Contemporary movements in planning theory: Critical essays in planning theory*, Vol. 3 (pp. 413-21). Aldershot: Ashgate.
- Sandercock, L. & Senbel, M. (2011). Spirituality, urban life and the urban professions. In Beaumont, J. & Baker, C. (Eds.), *Postsecular cities: religious space, theory and practice* (pp. 86-103). London and New York: Continuum.
- Santos, B. de S. (Ed.), (2007). *Another knowledge is possible: Beyond northern epistemologies*. London: Verso.
- Satprem. (1970). *Sri Aurobindo or the adventure of consciousness*. New York: Inst. for Evolutionary Research.
- Schumacher, E. F. (1973). *Small is beautiful: A study of economics as if people mattered*. New York: Harper & Row.
- Sen, A. (2009). *The idea of justice*. London: Penguin.
- Sommerville, M. A. & Rapport, D. J. (Eds.), (2000). *Transdisciplinarity: recreating integrated knowledge*. Oxford: EOLSS Publishers.
- Sri Aurobindo and The Mother. (1973). *A practical guide to integral yoga*. Pondicherry: Sri Aurobindo Ashram.
- Tacey, D. (2003). *The spirituality revolution: The emergence of contemporary spirituality*. Pymble, NSW: HarperCollins Publisher.

- Tanner, T.M., Mitchell, T., Polack, E., and Guenther, B. (2008). *Urban governance for adaptation: Assessing climate change resilience in ten Asian cities*. Report to Rockefeller Foundation, Institute of Development Studies, University of Sussex, UK. Retrieved July 6, 2008, from www.ids.ac.uk
- UN-Habitat (no date). *Climate change strategy 2010-2013*. Retrieved February 5, 2011, from <http://www.unhabitat.org/pmss/listItemDetails.aspx?publicationID=2861>
- UN-Habitat (2009). *Global report on human settlements 2009: Planning sustainable cities*. London and Sterling, VA: Earthscan.
- United Nations Development Programme (UNDP). (2007). *Human development report 2007/2008: Fighting climate change – Human solidarity in a divided world*. New York: Palgrave MacMillan.
- Walas Concepts (N.D.). *The earth charter cities manifesto*. Rotterdam. Retrieved November, 16, 2010, from http://www.earthcharterplus10.org/presentations/cities_communities/EC%20Cities%20Manifesto%20Walas_A4printable.pdf
- Wallis, S. (2010). Toward a science of metatheory. *Integral Review*, 6(3), 73-120.
- WBGU (German Advisory Council on Global Change). (2011). *World in transition: A social contract for sustainability*. Flagship report. Retrieved March 14, 2012, from http://www.wbgu.de/fileadmin/templates/dateien/veroeffentlichungen/hauptgutachten/jg2011/wbgu_jg2011_en.pdf
- Weizsäcker, E. U. von, Hargroves, K. & Smith, M. (2009). *Factor five: Transforming the global economy through 80 % improvements in resource productivity*. London: Earthscan.
- Wight, I. (2009). *Joining-up the spiritual and the professional in planning education: Exploring interfaces (for more spiritually-activist professing?)*. Paper presented at the AESOP 2009 Conference, 16 July, Liverpool.
- Wilber, K. (2000) [1995]. *Sex, ecology, spirituality: The spirit of evolution*. 2nd Edition, Boston: Shambhala Publications.
- Wilber, K. (2007). *Integral spirituality: A startling new role for religion in the modern and postmodern world*. Boston: Integral Books.
- Wilmsen, L.-S. (2011). *Intentionale Gemeinschaften als Räume der Transformation? Eine empirische sozialgeographische Analyse [Intentional communities as spaces of transformation? A socio-geographical analysis]*. Unpublished master dissertation, Westfälische Wilhelms-Universität, Münster.
- Wilmsen, L.-S. (2012). Spatial planning and spirituality: The impact of intentional communities. *Trialog* No. 107, Issue 4/2010 (published 04/2012), 33-38.
- Woiwode, C. (2001). *Moralökonomie und Interne Organisation der Gujarati Bania in Indien* ["Moral economy and internal organisation of the Banias of Gujarat, India"]. Unpublished master dissertation, Institute for Ethnology, Free University Berlin.
- Woiwode, C. (2007). Pro-poor governance of urban risks: the case of Ahmedabad. *Urban India*, 26(1), 18-44.
- Woiwode, C. (2008). Communicating urban risks in India. *Entwicklungsethnologie*, 16(1)/2007, 1-109.
- Woiwode, C. (2009). Risk reduction and urban development: The case of Ahmedabad, India. *Geographische Rundschau International Edition*, 5(3), 20-25.
- Woiwode, C. (2012a). Urban development and spirituality: Treading on new ground. *Trialog* No. 107, Issue 4/2010, 4-9.

- Woiwode, C. (2012b). "Urban" spirituality grounded: some selected case studies. *Dialog* No. 107, Issue 4/2010, 53-57.
- Woiwode, C. (2012c). Exploring new horizons: the nexus of climate change, urban development and spirituality. *International Journal of Urban Sustainable Development* (forthcoming July 2012), 1-17.
- Woiwode, C. & Scholz, W. (Eds.), (2012). *Dialog 107: A Journal for Planning and Building in Developing Countries: "Urban Development and Spirituality"*, Issue 4/2010 (published 04/2012).
- Zimmerman, M. (2009). Including and differentiating among perspectives: An integral approach to climate change. *Journal of Integral Theory and Practice*, 4(4), 1-26.