»Kopatz zeigt, wohin sich eine moderne Gesellschaft bewegen muss, wenn sie Nachhaltigkeit als selbstverständliche Routine etablieren möchte.«

Harald Welzer (Vorwort)

Damit Geräte weniger oft kaputtgehen, Tierhaltung artgerechter wird oder Zusatzstoffe aus Lebensmitteln verschwinden, brauchen wir neue Standards und Limits. Das Buch enthält eine Vielzahl konkreter Ideen, eine To-do-List für Politiker, Wirtschaft und Bürger.

Michael Kopatz

Ökoroutine

Damit wir tun, was wir für richtig halten

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A Harmonic Way to Transdisciplinarity
Experience from Global Health Development

Aiming at generating innovative solutions to mitigate global health challenges through working along the continuum from innovation to application harmonically leads to a transdisciplinary understanding of, and practice for, health and social development. The One Health approach is presented as a case study where a transdisciplinary concept and approach is validated in different social, cultural and ecological settings, and is subsequently put into public health practice leading to a measurable impact for human and animal health and well-being of the communities concerned.

It has always been a great pleasure to participate in events that aimed at understanding and living transdisciplinarity in science and application. Such events provide a stimulating environment for scientists, the populations concerned as well as the policy- and decision-makers to reflect about key questions and/or to solve pressing problems. They are a unique chance of actively pursuing the concept of “mutual learning for change” and also translating this fundamental concept into actions with impacts for the societies and social tissues we work with. Having my professional roots in epidemiology and public health and addressing the needs of poor countries and societies under resources constraints, I wish to discuss briefly the transdisciplinarity and the respective lessons learnt in relation to the global health challenges we face. These can be summarized in nine different key areas:

1. handling the dynamics of demographic, epidemiological and ecological patterns and transitions;
2. achieving people and household centered approaches, equity and access, that is, reaching equity effectiveness;
3. implementing systems thinking, decentralization, governance, partnership;
4. financing health and social systems;
5. moving monitoring towards “surveillance-response approaches” in health systems and through population-based observatory and/or cohort studies;
6. effectively using health and information/communication technologies;
7. overcoming inequities and applying public health ethics;
8. building and managing human resources;
9. research and development to accompany interventions.

Confronted with these challenges as a scientist, public health worker/cadre or decision-maker, one easily understands, defines and lives transdisciplinarity. All issues around the challenges to be researched or acted upon present themselves as multidisciplinary. The only way to tackle all these questions is through a truly interdisciplinary approach, a process of mutual learning as mentioned above. The answers, evidence and knowledge provided by such a process do no longer profile themselves by the scientific disciplines involved but by the inner value, the content, of the answer to the question asked and inquiry pursued. At the Swiss Tropical and Public Health Institute (Swiss TPH) and in our national and global network of partners, this very pragmatic or operational definition of transdisciplinarity has enormously helped us not only to engage effectively in mutual learning but in mutual learning for change. It finally is the approach that we have adapted from the concepts and strategies of participatory action research, which has its roots in the agricultural research-cum-action approaches “recherche-action-formation” first promoted in Senegal through ENDA Graf Sahel (1993/1994).

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1 Based on the lecture at the European Congress on Tropical Medicine and International Health (ECTMIH) – International Transdisciplinarity Conference (ITD) 2015, Basel, and on workshops of the National Centre of Competence in Research (NCCR) North-South focussing on mitigating syndromes of global change (1998 to 2012).

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An Example – One Health

The concept and practice of One Health is relevant and a good example for transdisciplinarity, ranging from innovation over validation to application within health and social systems. The history of integrative thinking of human and animal health is rich and dates back hundreds of years (Schwabe 1984). Integrated medical thinking was an important component of the foundation of universities in Europe (Rüegg 2004) and governed comparative medicine at the end of the 19th century. In the 20th century, it was Calvin Schwabe’s (1984) thorough rethinking of the concept of “one medicine” in 1976 that fully recognized the close systemic interaction of humans and animals for nutrition, livelihood and health. Today, the earliest forms of healing of humans and animals are still widely practiced in traditional pastoral societies. It is thus not surprising that the contemporary “one medicine” idea grew out of experiences in African communities. Through a large effort of the Swiss TPH led by Jakob Zinsstag, the initial concept of “one medicine” was validated in West-African pastoralist settings which led to an extension of the original concept to a broader approach to health and well-being resulting in the framework of One Health that was further validated in a number of situations and settings in Africa and Asia (Zinsstag et al. 2015). One Health is clearly also an integral part of the transdisciplinary ecosystem health approach promoted by Rapport et al. (1998).

The prospects and challenges of One Health focus around questions of an adequate theory of health and well-being and how the interdependence of humans and animals can be understood with given social-ecological systems leading to reconciling disease systems within a health and social system context. At the practical level, this boils down to questions on how disease surveillance systems, planning and priority setting as well as the implementation of interventions and their economic appraisal can be designed to capture the human and animal health issues guided by a comprehensive transdisciplinary perspective (Zinsstag et al. 2015). Aiming at 1. generating effective, system-based public health responses to zoonoses, particularly also to the emerging, re-emerging and/or neglected tropical diseases, as well as 2. to well-being and 3. to sustainability of our societies, imply the rigorous and comprehensive transdisciplinary perspective (Zinsstag et al. 2015). Aimings which led to an extension of the original concept to a broader approach to health and well-being resulting in the framework of One Health that was further validated in a number of situations and settings in Africa and Asia (Zinsstag et al. 2015). One Health is clearly also an integral part of the transdisciplinary ecosystem health approach promoted by Rapport et al. (1998).

Discussing sustainable health development and transdisciplinarity entails three key issues: sustainability, health and partnership (Tanner 1998).

Sustainability

Sustainability is a key word and far too often already a buzzword in all aspects of development co-operation. We all agree that any efforts put into development processes not only aim at obtaining results within a short period, but ought to be relevant and beneficial for generations to come. Sustainable development means “to ensure that development meets the needs of the present without compromising the ability of the future generations to meet their own needs” (WCED 1987, p. 8). This definition still waits to be translated into action, fully and coherently, in the health sector.

While a generally agreed definition of sustainability for health development is easily established, the formulation of an operational definition, in a given social, cultural, economic and political setting, is far from being achieved. A major problem that prevents effective implementation or “living” of sustainability rests already in the lack of precision or clear understanding, prevailing among most actors in the health development scene, on what needs to be sustained. Is sustainability mainly seen as a social, ecological or economical goal or as a combination of some or all of these dimensions? Neglecting the careful discussion on what a comprehensive understanding of sustainability means for a given context inevitably affects sustainable development. Moreover, sustainable development is not a firm and stable state of equilibrium or harmony, but a process of change in which activities (investments, resources, institutional arrangements) must match present as well as future needs. This is of particular importance for the health sector as changes in health development issues and health sector reforms are currently frequent and also substantial: decentralization and health district management, cost-sharing by the population concerned, health insurance schemes, priority setting based on the assessment of disease burden,2 optimizing public-private mix in the service offer, sectorial funding policies. These are the key words and concepts currently governing the discussion and global public health actions. However, they so far have hardly been coherently scrutinized in the light of our definition of sustainability, where provisions for the future and equality are prerequisites. Considering this situation, we feel that accomplishing sustainability in concrete health development activities implies focusing on the processes of decision-making based on the views and perceptions of all actors and beneficiaries.

Health

The understanding of health and well-being is fundamental for any development process aiming at sustainability. We have readily adopted the definition of health that forms the prerequisite of the Alma Ata declaration of primary health care: “a state of complete physical, mental and social well-being, and not merely the absence of disease or infirmity” (WHO 1978). Reality shows a different picture. Today, many still regard health as the absence of disease or illness and/or health as having exclusively biomedical dimensions. Clearly, in case we are really committed to assist and

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2 We refer to the assessment of disease burden DALYs (Disability Adjusted Life Years) as first introduced in the World Development Report 1993 (World Bank 1993).
ensure sustainable health development, we need to adopt the comprehensive definition of health and to see health as a positive quality that one can put at risk, maintain or enhance. Adopting this view also prevents the medicalization of health service provision and promotion. Moreover, unhelpful categories such as 1. preventive and curative medicine, 2. traditional and “modern” medicine, or 3. clinical and social and preventive medicine will no longer continue to exist as antagonistic dichotomies that affect sustainable developments. Many bi- and multilateral governmental as well as nongovernmental agencies have readjusted their health development policies and promote a holistic approach to health. The weaknesses however are clearly related to the operationalization of the holistic approach in a given setting and, thus, to the approach used in the planning of health service provision.

Health seen as a positive quality means considering measured and perceived risks, understanding of the needs and demands of the population concerned as well as an analysis of the health systems in place. Moreover, it reminds us that equality, one of the underlying principles of sustainability, means at the operational level “social equality”, that is, equity. Understanding health and health development in the terms outlined above reveals: only an interdisciplinary approach will lead us towards the transdisciplinary solution of securing sustainable health development.

**Partnership**

Sustainability in health development cannot be discussed without addressing the crucial driving force of the process, which is clearly the structure and dynamics of partnership. We have all moved from the concept and strategies of aid towards committed co-operation. The sound experience of many nongovernmental organizations in priority setting on the basis of participatory approaches involving actors and beneficiaries and by respecting local needs and demands was of particular importance for this change. Partnership is today the cornerstone and it is defined by well-assigned roles and responsibilities that allow the effective mutual learning for change. Clearly, all partners of a partnership need to engage in a learning process through which problems and potential solutions are identified and related to concepts and possibilities at national and international level. There is not a single formula – “one size fits all” – for partnership. The nature and pattern of partnership needs to be tailored to the dynamics of the global health challenges, but also the changing socio-economic climate and the social and political anatomy of a country or a region. Besides, we are continuously challenged to review and readjust any partnership arrangements, which is also a key issue of the mentioned approach of “recherche-action-formation” (ENDA Graf Sahel 1994).

**Outlook**

We examined health, health development and global health challenges within the context of the experience of Swiss TPH that aims at contributing to health and well-being among populations and population groups through excellence in research, teaching/training and direct public health activities at local, national and international level. Using the One Health concepts and actions as an example, we realized how transdisciplinarity is harmonically achieved at the conceptual and operational level through

- understanding health systemically, that is, disease systems are seen within health and social systems and vice versa;
- accepting that sustainability considerations as well as partnership arrangements with clearly assigned roles and responsibilities form crucial prerequisites, and
- recognition that the process of mutual learning for change across systems and cultures is determinant and driver at once.

Consequently, transdisciplinarity is no longer an aim, vision or dream, but a reality that will further govern on how science is becoming effective and beneficial for working towards the sustainable development goals and for our societies at large.

**References**


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**Marcel Tanner**