

## **HTA in a translational setting: opportunities and limitations for Responsible Innovation**

**Anna Laura van der Laan, Yvonne Cuijpers, Marianne Boenink,**

Universiteit Twente; [al.vanderlaan@gmail.com](mailto:al.vanderlaan@gmail.com)

The field of Health Technology Assessment (HTA) has turned up in the mid-seventies of the 20th century as a research enterprise concerned with the evaluation of medical technologies. It evolved alongside a broader shift in Western health care towards policies and practices that are 'evidence-based'. With regard to the enormous increase of new and emerging medical technologies, the need to assess and compare those technologies for their 'efficacy' (their capacity to produce the intended effect) and for their 'cost-effectiveness' was stressed. Consequently, a diverse set of HTA-approaches has entered the scene since then, approaches that are above all meant to help policy makers to make decisions about, for example, health care coverage or the marketing of a new technology. These HTA-approaches have however frequently been critiqued for limiting their evaluation to effects and costs: they leave broader ethical and societal concerns aside. In the past 30 years, various technology assessment (TA) approaches have emerged that do focus on ethical and societal aspects of new technologies in general, and their use has also been proposed for medical technologies in particular. Many of them are designed in such a way that these broader impacts are addressed already at early stages of technology development. As such, they correspond to the ideal of Responsible Innovation. Yet, 30 years later, despite the lively call for Responsible Innovation that resonates in the field of health care, such broader and early forms of TA have still not standardly been integrated into practices of the innovation of medical technologies.

Whereas TA-approaches such as 'constructive TA', 'real-time TA', 'ethical TA' or 'midstream modulation' have not become standard elements of innovation practices of medical technologies, methods for HTA do have been integrated in such practices more and more frequently. In this paper we discuss our findings of a case-study of a HTA-project to argue that new ways of doing HTA are emerging; ways that may offer opportunities for Responsible Innovation. The HTA-project we studied is part of a large research project in which different kinds of diagnostic techniques for Alzheimer's Disease are being developed. That research project is labelled as a so called 'Translational Research' (TR) project. With the notion TR, it is explicitly stressed that the goal of the project is to develop technologies that will actually reach their intended users. Within the research project, the translation metaphor is also used when presenting the HTA-endeavour as enabling 'wide scale translation in guidelines and clinical practice' of the new diagnostic instruments.

Two contrasting findings of our case-study will be central in our paper. First, we will discuss how the framing of HTA as a necessary ingredient for TR influences how HTA gets conceptualized – in this specific case as an 'obligatory passage point' within a linear model of TR. This obligatory passage point is constructed as a model that enables the HTA-scholars to calculate the cost-effectiveness of new diagnostic devices for different scenarios. This conceptualization of HTA fits the traditional views on HTA. However, we also show how the HTA endeavour nevertheless occurs parallel to the development of Alzheimer diagnostics – giving rise to various opportunities for HTA researchers and technology developers to interact. Together, they make critical choices in framing both the 'costs' and 'effects' to be 'put' in the model. We show how this results in a rich exchange of knowledge and considerations with regard to broader social and ethical impacts of the emerging diagnostic devices.

We conclude with discussing how our empirical findings offer fruitful insights about the possibilities and limitations for Responsible Innovation in HTA-settings such as the project we presented here.

## **New organizational forms in tourism as institutional innovations: a case study of tourism conservation enterprises in Eastern Africa**

**Machiel Lamers(1), Jakomijn van Wijk (2), René van der Duim (1)**

1 Wageningen University, 2 Maastricht School of Management; [wijk@msm.nl](mailto:wijk@msm.nl)

Tourism is claimed to be the world's largest industry (e.g. Urry, 2007). While tourism may generate positive impacts like job creation, infrastructure development, nature conservation and cultural exchange, it may also produce negative impacts like competition for natural resources, land speculation and intrusion upon local cultures. Hence, there is a need for sustainable development in tourism. For example, since the 1990s, tourism businesses, nature conservation organizations, international development organizations, and local communities in Eastern and Southern Africa have increasingly attempted to integrate their objectives, in order to find new ways for a sustained enhancement of community livelihood and protection of nature and wildlife by means of tourism (e.g. Ahebwa, van der Duim & Sandbrook, 2012; Manyara & Jones, 2007; Roe & Elliott, 2010; Spenceley & Goodwin, 2007).

Achieving sustainable development in the tourism industry not only requires technological breakthroughs, but also institutional innovations (Geels, 2002). Institutional innovations refer to "a new, embracing collaborative/organizational structure or legal framework that efficiently redirects or enhances the business in certain fields of tourism" (Hjalager, 2010: 3). While institutional innovations like ecolabels

and standards have been extensively studied in the tourism context (e.g. Chan & Wong, 2006; Font, 2002; Rivera, 2002), there is little understanding of new organizational forms as institutional innovations (Tracey, Phillips & Jarvis, 2011). An organizational form refers to “an archetypal configuration of structures and practices given coherence by underlying values regarded as appropriate within an institutional context” (Greenwood & Suddaby, 2006: 30). Addressing this knowledge gap is relevant to advance understanding of how new tourism niches like ecotourism and cultural tourism develop. Accordingly, this paper asks, how and why do new organizational forms in tourism emerge and evolve over time?

To answer this research question, we examine a new organizational form in the organizational field of tourism in Eastern Africa. Since the late 1990s, the African Wildlife Foundation (AWF) has developed and promoted tourism conservation enterprises outside national parks. A conservation enterprise refers to “a commercial activity which generates economic benefits in a way that supports the attainment of a conservation objective” (Elliott & Sumba, 2010: 7). For instance, eco-lodges, tented camps and safari walks are developed in areas rich of biodiversity to offer tourists a unique nature experience, whilst also contributing to the protection of this wildlife and the improvement of the livelihood of local communities on whose communal land wildlife resides. Drawing on rich qualitative materials including interviews, focus group interviews, documents and public resources, we examine the emergence and evolution of such enterprises as institutional innovations. Not only do we highlight the generative mechanisms behind this new organizational form, but also illustrate its design and impacts by elucidating three tourism conservation enterprises that have been launched at different points in time.

Our study makes four important contributions to the literature. First, we move beyond the focus on the impacts of tourism arrangements on the conservation-development nexus as commonly found in the tourism literature to call attention to how and why such arrangements come about in the first place. More specifically, we historically trace and scrutinize the role of a conservation organization in creating and promoting a new organizational form. Whilst this type of organization is greatly debated in the tourism literature, there is a “paucity of general knowledge” about their activities (Brockington & Scholfield, 2010: 1). Second, by describing three tourism conservation enterprises brokered by the AWF over time, we elucidate how this organizational form evolved on the ground by experimenting with various organizational constellations, financial constructions and governance mechanisms. While literature suggests that organizational forms take time to develop and gain legitimacy, our case study thus uncovers how this creative process unfolds. Third, we advance understanding of the transition toward sustainable tourism by generating insights into tourism conservation enterprises as illustrative examples of the macro-cultural discourse on ecotourism (Honey, 1998). By systematically comparing and contrasting tourism conservation enterprises with mainstream tourism ventures, we highlight how conservation enterprises contribute to sustainable development and in so doing are sufficiently “divergent” from other ventures to be regarded as innovative (Battilana, Leca & Boxenbaum, 2009: 69). Finally, by examining organizational attempts at biodiversity protection and poverty alleviation through tourism, we heed scholarly calls for addressing urgent societal matters in research (Hitt, Beamish, Jackson & Mathieu, 2007; Pearce, 2005). Our case findings suggest that tourism conservation enterprises generate positive impacts for wildlife and communities, but also point to the need to address governance challenges like shifts in local power relations, unequal distribution of benefits, the relations between partners, and issues of transparency and accountability. As such, our study has important managerial implications for organizations interested in linking tourism with biodiversity protection and livelihood improvement.

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### **Self-management and the design of tele-care technologies**

**Ivo Maathuis,**

Universiteit Twente; [i.j.h.maathuis@utwente.nl](mailto:i.j.h.maathuis@utwente.nl)

#### *Introduction*

Because of demographic changes and increasing life expectancy, Western society is faced with a substantial increase of the number of people suffering from a chronic illness in the future. One of the consequences of this development is an upcoming rise of costs for healthcare. Telecare technologies are considered to be one of the solutions for the growing costs in healthcare (Oudshoorn 2011). Telecare can be defined as remote provision of healthcare services via ICT applications. One of the aims of telecare technologies is enhancing self-management strategies of patients suffering from chronic illness.

Recent medical ethics literature discerns three dominant paradigms of self-management in telecare (Schermer 2010). In the first form of self-management (SelfM1) patients take over some practical tasks from healthcare professionals. Patients become an extension of the professional. This might help improve patients' health status or wellbeing, but it does not promote autonomy, because it does not involve any decision-making by patients, nor are the patients' own views or wishes involved. In the second form of self-management (SelfM2) patients learn to manage their disease in an almost professional manner. They take over interpretative and decisional tasks of professionals; they understand the meaning of the measured data, can interpret them and act accordingly. Patients become "proto-professionals" who follow guidelines from the medical perspective, but are not stimulated to integrate own views on successful disease management. In other words, also in the second form of self-management patient autonomy is not stimulated. In the third form of self-management (SelfM3) patients are enabled and stimulated to find their own way of living with their condition. Patients can make their own choices, which may not always be the best from a medical perspective but might enhance patients overall quality of life. Integrating one's own knowledge of one's body and one's bodily experiences into prescribed treatment or lifestyle is central here. The relationship between professionals and patients is not one of compliance (as in SelfM1 and SelfM2), but rather one of collaboration or concordance. Clinical expertise of professionals is integrated with the concerns, priorities and resources of patients. In this form of self-management patient autonomy is integrated in the concept of self-management.

#### *Case study*

This paper focuses on a specific case study: a research project aimed at the development of a telecare system in the Netherlands for patients suffering from chronic COPD (COPD dot COM). The objective of COPD dot COM is to design, develop and demonstrate a prototype system that supports disease management for COPD in such a way that it can be implemented in every day care. The system consists of a Body Area Network (BAN) for monitoring patients' activity levels and giving feedback to patients for changing behavior. The BAN consists of activity sensors combined with a PDA. Next to the BAN patients get access to a webportal, which is able to show the activity data measured by the BAN and which is used by patients to fill out an electronic triage diary for advice on the use of medication. In addition, the