

Multiple identities in cultural ecosystem services

Various reports (e.g. MA 2005; TEEB Foundation 2010; UK National Ecosystem Assessment 2011) and researchers (e.g. Chan et al 2012) have sought to bring clarity to the notion of cultural ecosystem services (CES) with the UK National Ecosystem Assessment Follow-on (2014) a recent contributor. One of the factors frequently mentioned as important for an understanding of CES is that of 'identity'. However, often it is not explained in detail what is meant by 'identity' and the term seems to be used to cover a variety of things. Here we begin to unpack the notion of identity and how different aspects of identities come into play in relation to interactions between humans and ecosystems and places. We provide an exploration of the concept by drawing together findings from empirical studies of several different types of environmental spaces (e.g. urban parks), ecosystems (e.g. forests) and landscapes to consider the potential existence of multiple identities within cultural ecosystem services.

We distinguish here between three different aspects of 'identities' and the ways in which they connect people and ecosystems. These include: (a) the identities attributed *by* people *to* a place or ecosystem, (b) the ways in which people's identities shape their interactions with ecosystems, and thus the co-production of ecosystem services and (c) the ways in which these interactions (and thus, ecosystem services) shape people's identities.

Identities ascribed to ecosystems, places and landscapes by people can be understood at a variety of scales. They can have identities as 'types' or 'icons' at a large spatial scale. For example, the Amazon region or the Himalayas may be regarded as typical of or iconic in relation to an ecosystem (e.g., rainforest, montane) or large scale landscape. These identities are often not dependent on personal experiences or connections but are perpetuated through images and stories which in turn shape our interactions with these places and thereby help recreate their identity as we re-interpret our experiences in relation to existing discourses. At the same time, particular places or ecosystems have specific identities for those who interact with them.

Identities of places are influenced by biophysical features (climatic characteristics, topography, rocks, water, vegetation...), cultural and historical connotations, such as present and past human use of the landscape, institutional arrangements such as ownership and access rights, and personal experiences and memories linked to particular places or types of places or ecosystems.

The identities we ascribe to places are seldom value neutral. Values attached to places may again be influenced by cultural norms (e.g. European fairy tales about forests as dark and dangerous places) as well as by personal experiences in these places. Often place identities may be ambiguous, as a wealth of different cultural norms and personal experiences may be drawn on in relation to one place or ecosystem. This was seen in focus groups on peatlands which showed that these are seen at the same time as 'typical of Scotland' and as 'wasteland'.

Identities of places can be intertwined with the identity of the people as inhabitants, stewards or users of that place, e.g. farmers who stress their descent from a line of farmers in a particular place (unpublished data). And indeed, the term 'identities' is more commonly used in relation to the identity of humans; and this is also the meaning employed in Church et al.'s (2014) framework. Next, we have a closer look at the relationship between people's identities and an ecosystem, and the role

that these interactions play in relation to ecosystem services. Two different relationships can be distinguished.

First, aspects of people's identities shape the co-production of ecosystem services. Through qualitative research that looked at the ways in which ecosystem services from woodlands are generated jointly by people and place, we identified a set of factors related to a person's identity that influenced the ways in which people interacted with a woodland (Fischer & Eastwood in prep). These factors included, for example, (a) memories and upbringing, (b) skills and preferences for activities, (c) social roles and perspectives and (d) one's identity in relation to the outdoors. These identity-related factors were complemented by a person's capabilities (including e.g., capital, physical capabilities and rights). Understanding how the factors worked in an individual helped our interviewees and us to understand the different ways in which people derived ecosystem services from the woodlands, ranging from the production of woodfuel to the creation of outdoor art exhibitions to more transient recreational opportunities.

Second, ecosystem services (and the process of their co-production) shape people's identities. In two studies, visitors to urban parks and river corridors were asked to describe their reasons for visiting the park or riparian area and how they felt after leaving. Qualitative analysis of their responses generated multiple dimensions of visit motivation for and post-visit effect, some of which emphasise aspects of personal identity (Irvine et al 2013; Irvine et al in prep). For users of both places, a small but present motivation for visiting both urban parks and riparian corridors was descriptive of a history of use (e.g. I usually come here; I came as a child). This same sense of identity across time was identified as a post-visit effect from both types of environments. A second aspect noted as a post-visit effect was a greater sense of personal uniqueness or distinct personal identity. This suggests that identities shape engagement with a place, as highlighted above – but that, in turn, engagement with a place also shapes identities. In addition to providing insight into the contribution of place to different aspects of a person's identity, these qualitative findings therefore also highlight the *transactional* nature of the relationship between person and place.

Quantitative analysis of questionnaire and ecological survey data from these same two studies of urban parks and river corridors also showed that the importance of a place to people's sense of personal identity may be associated with specific qualities of the place itself. For users of urban parks, one's distinct personal identity was related to a higher number of habitats or plant species in the park (Fuller et al 2007). In other words as actual habitat diversity or number of different types of plant species increased, so too did one's sense of one's own uniqueness. For individuals visiting river corridors, one's sense of identity as having 'continuity across time' was associated with higher levels of tree cover or greater number of bird species (Dallimer et al 2012). Interestingly greater plant species richness was negatively associated to 'having continuity over time', i.e. lower levels of this aspect of identity were associated with riparian areas which had higher numbers of plant species. While the factors underpinning these relationships are still unclear, these findings are a striking example of unexpected relationships between ecosystem characteristics and users' self-identity.

In this paper we have sought to differentiate amongst multiple identities within cultural ecosystem services. While the three aspects of identities clearly will interact with each other, we suggest a more careful differentiation between them may aid our understanding of cultural ecosystem services and how they contribute to well-being as well as to management of places and ecosystems.

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