



# Woods and Forests in British Society: progress in research and practice

Bianca Ambrose-Oji &  
Karen Fancett (Eds.)

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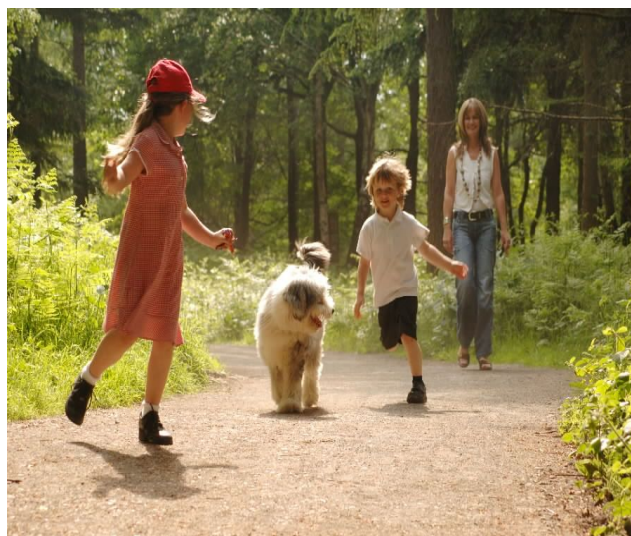
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## Table of Contents

### Introduction

(Marcus Sangster)

### Well-being, social values and woodlands

- |   |    |
|---|----|
| 1. Woodland freedoms and individualism: nature-situated self-development as a precursor to Cultural Service creation<br>(Helen P. King and Paul J. Burgess) ..... | 9  |
| 2. Access for all? Barriers to accessing woodlands and forests in the UK<br>(J. Morris, L. O'Brien, B. Ambrose-Oji, A. Lawrence and C. Carter) .....              | 25 |
| 3. Are we creating problems for the future? Children, young people and the concept of 'nature-deficit disorder'<br>(Liz O'Brien) .....                            | 35 |
| 4. Cultural and ecological well-being through art in forests<br>(Dave Pritchard) .....  | 44 |

### Economic perspectives on social valuation

- |   |    |
|---|----|
| 5. Tools for sustainability impact assessment of forestry policies: what role for social science?<br>(David Edwards) .....  | 51 |
| 6. Social perspective on the 'ecosystem services' approach: what roles do culture and identity play?<br>(Judith Hanna)..... | 57 |
| 7. Estimating aggregate amenity value of woodland views using spatial analysis<br>(Vadims Sarajevs) .....                   | 63 |

### Governance, policy and evidence

- |   |    |
|---|----|
| 8. Constructing partnerships with state forestry: the British experience<br>(Bianca Ambrose-Oji, Anna Lawrence, Jenny Wallace and Amy Stewart) .....  | 67 |
| 9. The evolution of community woodlands in Scotland, Wales and England<br>(Anna Lawrence, Zena Wilmot, Phil Tidey, Angela Pollard, Jon Hollingdale, Katy Harris, Amanda Calvert and Bianca Ambrose-Oji) ..... | 74 |

10. Measuring the impact of social forestry interventions (Katie Eastaugh) .....	82
11. New virtue in virtuous forests: community woodlands in Scotland a decade on (Dr Rhys Evans) .....	87
<b>Appendix:</b> A copy of the full conference programme and programme .....	94

## Introduction

When we first started to plan this conference our aims were simple. We wanted to provide an opportunity for social researchers in forestry to meet, discuss their work and feel that they were part of a research community. The volume of social research and the number of researchers has greatly increased since our last conference in 2001 in Cardiff<sup>1</sup>. We felt that the time was right to bring people together to explore current research questions and the approaches being used to answer them.

What pleased us especially was the interest shown not only by researchers, which was very welcome but largely expected, but also by forestry practitioners. We could not have had a clearer indication that social science is valuable and is useful to the wider forestry community. It also indicates the nature of the problems that forest managers face today. Forestry traditionally has very close relationships between research, policy and practice and it seems clear that social science has been adopted by the sector within this tradition.

Reflecting on the conference after it had finished we contrasted it with similar events in other landed sectors. What seems to make forestry singular is that the researchers seem to be much less observers and much more participants. They seem to be researching something that they feel they are a part of. Perhaps this is because even the most theoretical social scientists respond positively when they feel that their research will be taken up and used quickly and with visible impact. Ownership and institutional structures in forestry make this possible in a way that is difficult to envisage in agriculture. Another cause for reflection is that the distinctions that social science makes between research paradigms and methodological approaches are of little interest to practitioners. Whilst this can help reduce barriers to mixed-method and to interdisciplinary research it places particular demands on the researchers. On the one hand they must maintain rigour and make a case that withstands the critical judgement of their peers whilst on the other they have to communicate often complex concepts to folk who want simply to make a decision and get something done.

Our conference demonstrated that social scientists in forestry are up to the task. I was deeply gratified by the quality of the research, the presentations and by the number of young researchers who today see forestry as a research topic that is relevant to a career in mainstream social research. This is a direct result of the high standards that we have all set ourselves and is a testimony to the flexibility and openness to new ideas of the forestry profession in the UK and Europe.

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<sup>1</sup> (see here [http://www.forestry.gov.uk/pdf/treesarecompany.pdf/\\$FILE/treesarecompany.pdf](http://www.forestry.gov.uk/pdf/treesarecompany.pdf/$FILE/treesarecompany.pdf))

My thanks go to all the members of the organising committee but especially to Dr Ambrose-Oji whose hard work and intelligence made it such a success.

Marcus Sangster, Land Use and Social Research, Forestry Commission





**Well-being, social values and woodlands**



# 1. Woodland freedoms and individualism: nature-situated self-development as a precursor to Cultural Service creation

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## Introduction

The 'ecosystem services' approach has emerged as a framework to align UK natural resource management and governance (Defra, 2007), with the intention of reducing damage to ecosystems (Millennium Ecosystem Assessment, 2005a) and improving the quality of life (Defra, 2010). This approach presents the socio-cultural services obtained from ecosystems through the use of two closely related terms; namely the *Information Function* (de Groot *et al.*, 2002; Chiesura and de Groot, 2003; Chiesura, 2004), and the *Cultural Service* (Costanza *et al.*, 1997; Millennium Ecosystem Assessment, 2005b; Fiedler *et al.*, 2008; Martín-López *et al.*, 2009).

This paper outlines a need for further study in the area, offers a brief overview of selected results from ongoing doctoral research on the recreational uses of woodland, and introduces an alternative conceptual framework for understanding the socio-cultural services provided by ecosystems. Interim conclusions from the study are discussed, which help to reveal the unique experience a woodland provides for many people. Conclusions from the study will endeavour to explain the unique role of a woodland experience, ultimately contributing to the development of a theory for cultural services within the ecosystem services approach.

Within this framework then, an Information Function refers to ecosystems' provision of 'space and a suitable substrate for many human activities', which offer '... opportunities for reflection, aesthetic enjoyment and spiritual enrichment' (de Groot *et al.*, 2002: 106). The alternative Cultural Service term conceptualises this phenomena as 'non-material benefits people obtain from ecosystems through spiritual enrichment, cognitive development, reflection, recreation, and aesthetic experiences' (Millennium Ecosystem Assessment, 2005a: 40). Published works have expanded these Information Function/Cultural Service (IF/CS) definitions through further sub-categorisation, as detailed in Table 1.1 (NB blue lines were added by the authors to indicate convergent themes).

**Table 1.1** Comparison of Information Function/Cultural Service (IF/CS) sub-categories as described by different ecosystem services approach published frameworks. MA = Millennium Ecosystem Assessment

Cultural Service		Information Function	
MA (2005b, Ch. 17)	MA (2005a)	de Groot <i>et al.</i> (2002)	Chiesura (2004)
Knowledge systems	Knowledge systems	Science and education	Norms and values
Education values			
Aesthetic values	Aesthetic appreciation	Aesthetic information	Freedom
Inspiration	Inspiration	Artistic and cultural	
Cultural diversity	Cultural identity		
Sense of place			
Social relations			Social contact
Cultural heritage	Heritage values	Spiritual and historic	Self-development
Spiritual and religious value	Spiritual services		Ideals
Recreation and tourism	Recreation and tourism	Recreation	Recreation Psycho-physical health

Various problems arise when attempting to apply the IF/CS concept in a systematic way. Published accounts of Information Function as an independent category (see Table 1.1) contain subtle differences in terminology, which frequently overlap, offer little rationale and references for the selected grouping and terminology, and do not account for the part played by separate ecosystem components and underlying processes (as described for other ecosystem services). There is a lack of studies specific to the IF/CS topic, while the absence of a unified methodological approach prevents the comparison of different study results. Moreover, IF/CS is thought to be experienced by individuals (e.g. inspiration), as well as groups (e.g. community identity associated with a specific land feature), and is also recognised as a phenomenon at a macro-level (e.g. economic contributions from eco-recreation), making accurate identification and valuation of IF/CS a challenging task.

The aim of this study is to clarify and enhance the usability of the IF/CS academic concept through the following objectives:

1. To review the current state of IF/CS knowledge.
2. To identify evidence of IF/CS in a semi-natural setting.
3. To identify contextual variables influencing IF/CS in a semi-natural setting.
4. To deliver conceptual improvements to IF/CS theory.

The body of research that relates to IF/CS is substantial yet fragmented, and is rapidly expanding across a broad multi-disciplinary base. An expanded literature review (including works from environmental psychology, sociology of place, human geography, natural resource management and ecological economics) suggests at least 12 subject areas associated with IF/CS which highlight multifarious elements relevant to humans' experience of nature (Table 1.2). It is observed, however, that these publications do not (in the majority of cases) present variables in such a way which indicates *causality*, since there is no single factor that can be attributed to a specific IF/CS-type phenomenon. Instead, a range of causes which vary in quantity, frequency and quality are perceived to interrelate, creating different and unique forms of ecosystem experience.

**Table 1.2** Examples of literature associated with Information Function (IF) and Cultural Service (CS) grouped into 15 broad areas

<b>IF/CS related area</b>	<b>Published literature</b>
Nature and well-being	Dodds (1997); Lees and Evans (2003); Tzoulas <i>et al.</i> (2007)
Mental restoration	Hartig <i>et al.</i> (1991); Kaplan (1995); Macnaghten <i>et al.</i> (1998); Berto (2005); Hansmann <i>et al.</i> (2007); Chang <i>et al.</i> (2008); Korpela <i>et al.</i> (2008)
Therapeutic landscapes	Townsend (2006); Yamada (2006); Velarde <i>et al.</i> (2007); English <i>et al.</i> (2008); Korpela <i>et al.</i> (2008); Kingsley <i>et al.</i> (2009)
Mystery and spiritual symbolism	Burgess (1995); Williams and Harvey (2001); Collar (2003); O'Brien (2004); Millennium Ecosystem Assessment (2005)
Social and civic benefits	Burgess (1995); Coley <i>et al.</i> (1997); Bell <i>et al.</i> (2004); Kuo (2003); Morris and Urry (2006)
Economic role	Martin and Sunley (2007)
Educational role	Macnaghten <i>et al.</i> (1998); Wells (2000); O'Brien (2004); O'Brien and Murray (2006)
Individual idiosyncrasies	Buttimer (1976); Ohta (2001)
Connectedness to nature	Mayer and Frantz (2004); Schultz <i>et al.</i> (2004); Frantz <i>et al.</i> (2005)
Socio-cultural	Douquet and O'Connor (2003); Sanesi <i>et al.</i> (2006); Han (2007)

interpretations	
Preference/scenery types	Kaplan (1989); Burgess (1995); Coley <i>et al.</i> (1997); Lohr and Pearson-Mims (2006); Han (2007)
Role of biodiversity	Collar (2003)
Specific sensory experience	Ulrich (1984); Burgess (1995); Macnaghten <i>et al.</i> (1998); Williams and Harvey (2001); Bell <i>et al.</i> (2004); Yamada (2006)
Disservices and perceptions of risk	Burgess (1995); Travlou (2003); Mornement (2005); O'Brien and Tabbush (2005); Agbenyega <i>et al.</i> (2009)
Function trade-offs	Collar (2003); Crosby (2003); CABE (2005); Newton and Freyfogle (2005)

Notably, it has been found that prior acquaintance with the environment, particularly childhood contact (Louv, 2006), and perceived connectedness to nature (Mayer and Frantz, 2004; Schultz *et al.*, 2004), impact upon current experience and actions towards the natural environment. Additionally, a growing literature on mental restoration (see Table 1.2) offers a definition of environmental conditions leading to this particular psychological state. Generally, however, due to the nature of the general IF/CS topic traversing, as it does, both psycho-social and ecological-biological worlds, it is observed that the philosophical and paradigmatic bases of research are fundamental to study design, presentation of results and the emphasis of particular features within analyses. The treatment of IF/CS-relevant findings would therefore benefit from a conceptual structure, with which to align and cross compare information.

## Methodological and epistemological statement

For the purposes of this study, the IF/CS phenomena has been understood to be an ecosystem service which is the result of an external natural environment affecting the internal state of a person who has come into direct or indirect contact with that environment. This suggests that an IF/CS study should address two issues: the actual phenomena of experience, *in situ*, as reported by visitors, and an account of the context for that experience, i.e. factors which have led to the natural environment which part-creates and supports the IF/CS experience. The study recognises that individuals construct experience according to their own particular internal mechanisms, but that the physical world has substance and relevance which transcends meaning as attributed by individuals.

## Results

### Context for IF/CS experience

The study reported here is taking place in Aspley Woods and Heath (Bedfordshire/Buckinghamshire), situated on a geological formation named the

Greensand Ridge (Landscape Character feature JCA 90). The site has been subject to geomorphological processes, which have deposited a layer of Lower Greensand soil and Fullers Earth throughout the area. These in turn have influenced a range of ecological habitats (see Table 1.3) and subsequent land use activities such as mineral quarrying and commercial forestry. The resultant undulating topography and dense land cover interspersed with open heathland have made the site ideal for a range of educational, recreational and sporting activities, including downhill mountain biking, bmx dirt-ramp jumping, orienteering, Nordic walking, remote-control car racing, horse-riding, off-leash dog-walking, and incidences of illicit activities including fire lighting, motorcross riding and illegal raves. The area also contains a Site of Special Scientific Interest, and a Scheduled Ancient Monument.

**Table 1.3** Overview of the research methodology used in the project

<b>Research design</b>	<b>Selected methodological approach</b>
Design	Flexible exploratory phased case study
Approach	Qualitative, interpretative, phenomenological social psychology
Data collection	Document review; on-site semi-structured in-depth interviews; observation
Data analysis	Coding and clustering
Interview sample	42 visitors (generating 24 transcripts); 6 landowner/manager interviews
Study site	340 ha semi-natural mixed habitat consisting of coniferous and mixed woodland (some ancient); dry acid grassland; heathland

The area forms part of the Bedford Estate and extensive public access is allowed through an Access Agreement established with the relevant county councils and implemented by local conservation charity 'The Greensand Trust'. Historically, public use of the area changed from tribal use to common land and then enclosed parish land before the Estate's acquisition. The present network of permitted footpaths, multi-functional land use and minimalist public access management create substantial opportunities for diverse recreational activity. This circumstance makes the site significantly important to the two local authorities in terms of green infrastructure, particularly given its proximity to the key government urban growth area of Milton Keynes. Concerns have been raised, however, regarding ecological sensitivity, and funding for public access management.

### **Phenomena of IF/CS experience: nature-situated self-development**

Interview findings indicate that this semi-natural woodland and heath setting offers a considerably different experience than that provided both by green space created specifically for public access and more urbanised environments. A common thread

running through many of the interviews concerned the use of the woodland space as an opportunity for self-betterment. This occurred as both physical development (fitness) and psychological development. It was observed that 'something' about the woodland experience enabled people to embrace other aspects of their self; to reflect upon, with discernment, everyday life in such a way that well-being might be improved, for example:

*Riding you're at one with yourself – it's a flow activity. You stop thinking – you're not worrying about bills or anything. It's all very Zen.*

*We go through puddles, trying to splash each other. It makes your outlook on life positive – it's a balance to a stressful job.*

*I feel different after. It's like, I feel crappy and stressed at work, then after we go back I'm refreshed. Like more chilled out.*

*I'm a runner ... I can't say what it is that I like, it's just me, part of my identity. It's an intrinsic part of my life.*

*This area is ancient. I like that sense that it's ancient ... this wood has been here a long time, it's permanent, it has a sense of permanence about it.*

The analysis suggests that the area offered four areas of psychological self-development, namely (i) improved cognitive functioning, (ii) improved mental attitude, (iii) confirmation of self-identity and (iv) the experience of feeling connected. Features of the site referred to in relation to these experiences included a feeling of freedom (connected to minimal rules), the experience of solitude, the history of the woods, and landscape features of woodland cover and topography. The observation that the combination of variables provided by this site offered opportunities for psychological self-development is a finding being taken forward in research currently under way, and is explored further in the discussion below.

## Framework for conceptualising IF/CS: experience into Cultural Service

Analysis of primary data, combined with theoretical contributions from environmental psychology (Bonnes and Secchiaroli, 1995; Heft, 2001; Gifford, 2002) and social psychology (Rosenberg and Kaplan, 1982; Semin, 1996), has led to an interim conclusion: namely that sensory information derived from an ecosystem must be mediated through *individual behavioural responses* in order to produce a *socio-cultural response*. It is observed that this is not made clear by current IF/CS literature, and that omitting this stage of what manifests as a 'process' (rather than an object) hinders our understanding of this ecosystem service considerably.

As such, it is proposed that the terms Information Function (de Groot *et al.*, 2002) and Cultural Service (Millennium Ecosystem Assessment, 2005), rather than being used

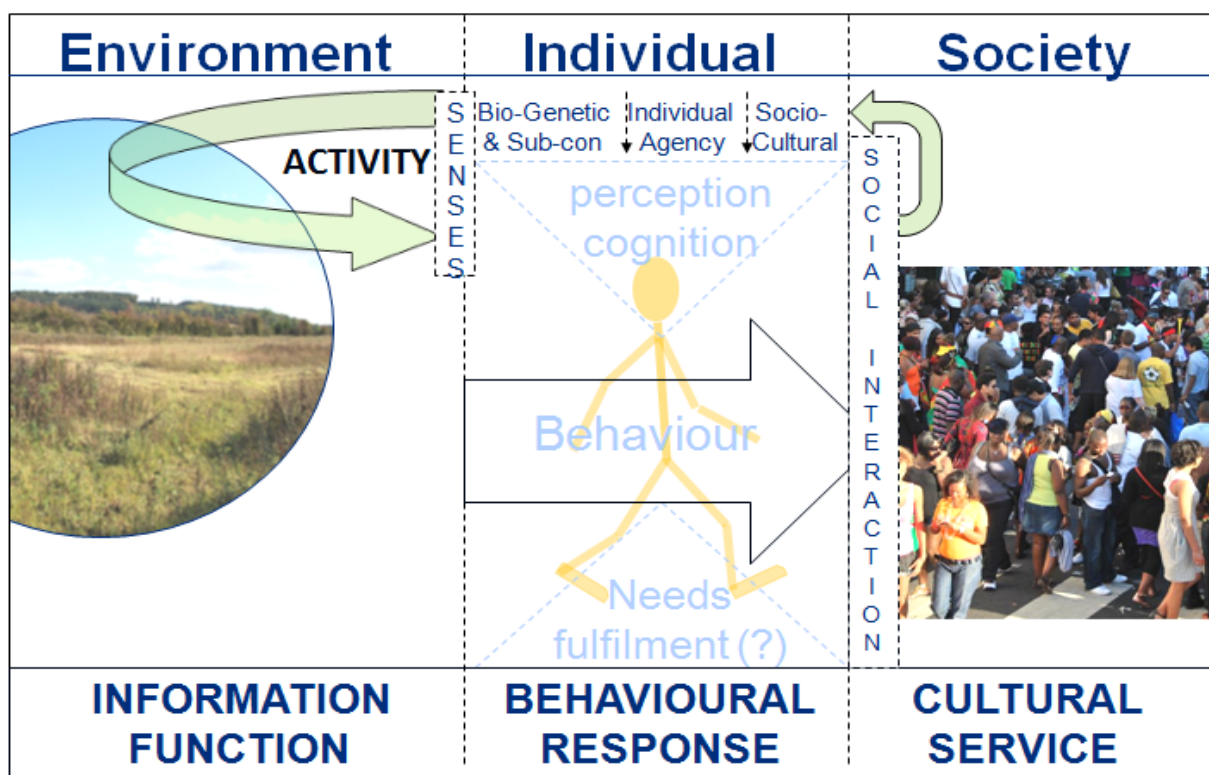


synonymously, should be considered as *separate* components of a process. To this end, a new set of definitions are offered (see Table 1.4) to accompany a conceptual framework (Figure 1.1), intended to clarify the process of ecosystem to social system benefit transfer.

**Table 1.4** New definitions relating to psycho-socio-cultural ecosystem services

Term	Explanation
Information Function	Stimuli from an environment high in biotic activity
Eco-behavioural response	Any physical or psychological reaction to Information Function stimulus
Cultural Service	Social interaction which is influenced by Information Function exposure, which may result in institutional/governance-level change

**Figure 1.1** Conceptual diagram showing that individual behavioural responses mediate the development of an Information Function into a Cultural Service



It should be noted that an individual will perceive only a part of all the available sensory information available from a natural environment, and that this is moderated by the activity that the individual is involved in. The perceived sensory information will vary

according to (i) the features of the physical environment, (ii) the activity undertaken, and (iii) the sensory range of the individual, which will then be processed internally. Forces influencing the resultant cognitive and perceptual processes include subconscious and biogenetically determined mechanisms, internalised socio-cultural norms and values, and individual agency. Emotional and/or physical behavioural responses may subsequently result in some personal benefit (needs fulfilment), and influence engagement in further socio-cultural or physical–material interactions. It is suggested that these interactions and/or outputs that are attributable to the internalised natural-landscape-related sensory information be termed *cultural services*.

## Discussion

The results of primary data collection (outlined above) showed this woodland/heathland setting to be used for behaviour which may be interpreted as psychological self-development. Aspects of this conduct bear relation to accounts of similar behaviour in alternative settings, published in the academic areas of emotional regulation and positive clinical psychology (see Table 1.5).

**Table 1.5** Examples of how the four observed areas of woodland-situated psychological development link with other published non-IF/CS literature.

<b>Finding</b>	<b>Literary connection</b>	<b>References</b>
Improved cognitive functioning	Self-monitoring Self-regulation	Carver (1979, 2004); Lewis (1991); McCullough and Willoughby (2009)
Improved mental attitude	Restoration Mindfulness	Hartig <i>et al.</i> (1991); Kaplan (1995); Berto (2005); Lau <i>et al.</i> (2006); Feldman <i>et al.</i> (2007); Shapiro (2009)
Confirmation of self-identity	Self-realisation Self-actualisation	Maslow (1954); Clayton and Opatow (2003); Giddens (2007)
Experience of feeling connected	Connection to nature Compassion Unitative experience	May (1982); Schultz <i>et al.</i> (2004); Kraus and Sears (2009)

There are a number of psychological health benefits reported by literatures relating to self-regulation and mindfulness, including increasing cognitive clarity, objectivity and improved emotional intelligence. Reported reductions in negative states such as experience avoidance, worry, rumination and over-generalisation have also been found to result in improved physical health (Lovallo, 2004), and connect to new thinking on well-being (Haworth and Hart, 2007).

Evidence related to activities undertaken by woodland visitors which act to strengthen their sense of identity also bear strong relation to theories on *individuation*, *self-actualisation* and the concept of higher needs (as per Chiesura, 2004). In order that people may 'regenerate' themselves as individuals, an amount of self-directed attention must take place, since 'the self is recursive or reflexive to the degree that people constantly monitor, or watch, their own activities, thoughts or emotions' (Elliott, 2008: 10). The process of self-actualisation (Maslow, 1954) is reported to be a largely subjective and unconsciously motivated experience. Likewise, individuation (Carver, 2004) may be reached in a number of ways, compatible with the situation and personality.

It is observed that the ability of this particular woodland site to provide a setting conducive to mindfulness, self-regulation and individuation may be related to perceived 'freedoms', and opportunities for unsupervised play (adults and children), a circumstance which has arisen through minimal public access management, and land use orientated towards timber production rather than recreation. This nodule of 'wilderness', in such close proximity to urban settlement, thus appears to offer people an environment rich in biotic stimuli, which also presents a new set of social 'rules', away from audience which requires individuals to 'perform' (Goffman, 1959), and without the effects of explicit or concealed supervision (Foucault, 1994).

## Conclusion

Interim findings from this ongoing research indicate that the combination of variables which comprise *this* study site seems to provide individuals with opportunities for self-development. A matter for further exploration is whether this finding is widespread and, if so, what it is about the woodland setting which provides the circumstances for these behaviours.

It has also been concluded that the ecosystem service approach may benefit from the inclusion of theory relating to the process of Cultural Service creation. In light of this, the acknowledgement that ecosystem stimuli (the Information Function) is *responded to* by individuals, who then *interact* to produce a Cultural Service would, it is felt, substantially improve the understanding of this service.

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