Adventure Tourism Research: a Guide to the Literature

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Abstract

Adventure tourism is a substantial industry sector which to date has received relatively little research attention. Most relevant research is from outdoor recreation. The major research themes are: psychological, including thrills, conflicts and norms; safety, including injuries, illnesses and insurance; impacts, whether ecological, social or economic; and participation and management. There has been rather little research on the structure of adventure tourism products or associated business aspects. Future research priorities include: operational audits; commercial statistics; client characteristics; site geography; equipment manufacture; safety and insurance; recreation ecology; adventure destination marketing; and links with amenity migration and lifestyle.

Introduction

Adventure tourism is a large but little-studied sector (Buckley 2004a, Travel Industry Association of America, 2005). Here, therefore, I review the principal themes addressed to date in adventure tourism research, in order to identify future priorities.

This review does not attempt to summarise the findings of each individual piece of published research, but rather to discern the major directions in the research literature overall. To achieve this as succinctly as possible, clusters of related references are presented in tabular form. The number of references listed for different topics in these tables is not itself a measure of research effort, since for some topics there are recent reviews and for others there are not. Rather, the titles and structure of the tables are intended to illustrate the research themes identified, and the references are there to demonstrate the data behind these patterns.
Adventure tourism has been variously defined (Weaver, 1998; Fennell, 1999; Manning, 1999; Bentley et al., 2000, 2001a,b,c; Buckley, 2000, 2004a; Bentley and Page, 2001; Newsome et al., 2001; Page and Dowling, 2002). Broadly, it means guided commercial tours where the principal attraction is an outdoor activity which relies on features of the natural terrain, generally requires specialised sporting or similar equipment, and is exciting for the tour clients.

There seem to be five books of particular relevance to adventure tourism: Miles and Priest (1999) on adventure programming in outdoor education; Hudson (2002), focussing principally on sports tourism; Swarbrooke et al. (2003) on human adventure psychology; Easson (2006) on the philosophy and psychology of extreme sports; and Buckley (2006) on the structure of adventure tourism products.

The majority of relevant research literature, however, seems to be derived from other fields of tourism, outdoor recreation and outdoor education. Texts on ecotourism, recreational tourism, tourism in protected areas and even wilderness management and say little or nothing about adventure tourism, though some do mention commercial outfitters and outdoor recreational activities briefly.

**Research Themes**

The principal themes in adventure recreation research have been psychological, focussing on the reasons why people engage in adventure activities and their experiences whilst doing so (Table 1). Adventure tourists want to be thrilled and perhaps frightened but not actually endangered (Cater, 2005). Such sensation seeking behaviour, and perceptions of risk, have been reviewed more generally by Cheron and Ritchie (1982), Ewert and Hollenhorst (1989), Crawford et al. (1991), Slanger and Rudestam (1997), Jack and Ronan (1998), Holyfield (1999) and Fluker and Turner (2000).

Behavioural norms, and ways to measure and change them, have received particular attention (Table 1). Recent reviews include Manning et al. (2002, 2004) and Manning and Freimund (2004). One useful practical application is through codes of conduct.
These have proliferated in many sectors worldwide, but their effectiveness has rarely been tested, and generally found wanting. Scarpaci and Dayanthi (2003), for example, found that swim-with-dolphin tour operators persistently breached an operational code of conduct even though it was a legislated condition of their operating permits and there were identified observers on board their vessels.

Conflicts between practitioners of different activities in the same area have also received attention. In addition to the activity-specific examples in Table 2, general reviews have been provided by Jacob and Schreyer (1980), Devall and Harry (1981), Hendricks (1995), Watson (1995), Schneider (2000) and Vaske et al. (2004). Conflicts may be triggered by fashion, age, gender or experience, as well as different activities. They may occur between commercial tour clients and private exponents of the same activity. They are especially common between motorised and non-motorised users of the same areas, where motorised users seem to be unaware or indifferent to their impacts on the silence, solitude and safety of non-motorised users.

Accident and injury statistics provide another major theme (Table 3). Most of the original data are presented in medical journals, but the tourism implications are summarised well by Bentley et al. (2003) and Page et al. (2003, 2005). Snow sports and diving have been investigated most intensively, with reports on the frequencies of different injuries and the effects of age, experience and safety equipment.

The environmental impacts of outdoor recreation have received some attention, and much of this is directly applicable in commercial adventure tourism. Some impacts, activities and areas have been analysed much more than others (Table 4). There are also reviews of impacts on particular ecosystem components, such as Beale and Monaghan (2004), Buckley (2004b,c) and Cole (2004).

From a tourism management perspective, one of the critical issues is whether interpretation, especially by commercial tour guides, can successfully reduce visitor impacts. There seem to be only two relevant studies, by Medio et al. (1997) for divers and Littlefair (2004) for hikers.
The economic and to a lesser extent the social impacts of some adventure tourism subsectors have also been addressed, but only in some areas (Table 4), and using a variety of different definitions and estimation methods (Buckley, 1998; Mallett, 1998; Page et al., 2005).

Relatively few authors have described the structure of individual adventure tourism products (Table 5). There are, however, a number of descriptions of outdoor recreation activities, commercial as well as individual, at particular adventure destinations; and various analyses of participation rates and preferences (Table 5). Participation in adventure tourism and recreation has also attracted particular attention from a land management perspective (Cordell and Bergstrom, 1991; Watson et al., 1995; Cole, 1996; Hammitt and Cole, 1998; Bowker, 2001; Hendee and Dawson, 2002; Ewert and Jamieson, 2003; Outdoor Industry Association, 2005).

**Research priorities**

Any selection of research priorities will probably reflect the disciplinary background of the person making the selection. With that caveat, here are my suggestions:
operational audits and case studies of individual adventure tourism products as a basis for general trend and pattern analyses.

commercial statistics: how many businesses offer what products where and at what price.

client characteristics: when, where and for how long they travel, and how such patterns depend on demographic factors.

similarities and differences between adventure tourism and non-commercial adventure recreation, so as to apply recreation research to adventure tourism

geography of icon and secondary sites for different adventure activities, both extreme and routine.

manufacture and sale of adventure equipment: technologies, designs, materials, models, prices, volumes, partitioning between manufacturers, changes in product mixes over time, alliances between manufacturers and lobby groups.

legal wording of waivers, disclaimers, indemnities, insurances and permit conditions.

accident and disease statistics for different areas and activities recreation ecology: impacts of different activities under different conditions on different ecosystem components

social impacts of adventure tourism operations on local residents and communities

links between adventure tourism and amenity migration.

links between adventure tourism and broader lifestyle aspects.

Conclusions

Most of the research currently applied in commercial adventure tourism is actually derived from the outdoor recreation literature. Adventure tourism deserves research attention in its own right. In particular, the focus to date seems to have been on the individual participants, their risks and experiences. The business and geography of adventure tourism products, packages and providers seems to have been ignored.
### Table 1. Psychological Aspects of Adventure Tourism

<table>
<thead>
<tr>
<th>Activity</th>
<th>Thrills, Attitude</th>
<th>Norms, Codes, Compliance</th>
<th>Service, Guiding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Raft, kayak</td>
<td></td>
<td>Shelby 1981;</td>
<td>Arnoald and Price 2003; Sharpe 2005</td>
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<td></td>
<td></td>
<td>Wellman <em>et al.</em> 1982;</td>
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<td></td>
<td></td>
<td>Shelby <em>et al.</em> 1996</td>
<td></td>
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<tr>
<td>Dive, snorkel</td>
<td></td>
<td>Inglis <em>et al.</em> 1999</td>
<td>O’Neill <em>et al.</em> 2002</td>
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<tr>
<td>Surfing</td>
<td></td>
<td>Farmer 1992</td>
<td></td>
</tr>
<tr>
<td>Climbing, mountaineering</td>
<td></td>
<td>Ewert 1994; Breivik 1996;</td>
<td>Jakus and Shaw 1997</td>
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<td></td>
<td></td>
<td>Feher <em>et al.</em> 1998;</td>
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<td></td>
<td></td>
<td>Schuster <em>et al.</em> 2001;</td>
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<td></td>
<td></td>
<td>Delle Fave <em>et al.</em> 2003</td>
<td></td>
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<tr>
<td>Hike</td>
<td>Manning 1999;</td>
<td>Vaske <em>et al.</em> 1986;</td>
<td></td>
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<td>Snowmobile</td>
<td></td>
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<td>Wildlife, marine and estuarine</td>
<td>Gyimothy and</td>
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<td></td>
<td>Mykletun 2004</td>
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### Table 2. Activity-Based Conflicts in Adventure Tourism

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<thead>
<tr>
<th>Activity 1</th>
<th>Activity 2</th>
<th>References</th>
</tr>
</thead>
<tbody>
<tr>
<td>skiers</td>
<td>snowboarders</td>
<td>Williams <em>et al.</em> 1994; Thapa and Graefe 2003; Vaske <em>et al.</em> 2004;</td>
</tr>
<tr>
<td>hikers</td>
<td>riders, packers</td>
<td>Watson <em>et al.</em> 1994; Blahna <em>et al.</em> 1995;</td>
</tr>
<tr>
<td>hikers</td>
<td>mountain bikers</td>
<td>Watson <em>et al.</em> 1991; Ramthun 1995; Carothers <em>et al.</em> 2001;</td>
</tr>
<tr>
<td>paddlers</td>
<td>motorboaters</td>
<td>Shelby 1980; Adelman <em>et al.</em> 1982;</td>
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</table>
Table 3. Risks, Accidents and Sickness in Adventure Tourism

<table>
<thead>
<tr>
<th>Activity</th>
<th>Reference</th>
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</thead>
<tbody>
<tr>
<td>Raft, kayak</td>
<td>Schoen and Stano 2002; Bentley et al. 2003; Page et al. 2003</td>
</tr>
<tr>
<td>Surfing</td>
<td>Nathanson et al. 2002</td>
</tr>
<tr>
<td>Climbing, mountaineering</td>
<td>Bentley et al. 2003; Williamson 1999; Malcolm 2001, Page et al. 2005</td>
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<tr>
<td>Riding, biking</td>
<td>Bentley et al. 2003</td>
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</tbody>
</table>
### Table 4. Ecological and Socioeconomic Impacts of Adventure Tourism

<table>
<thead>
<tr>
<th>Activity</th>
<th>Ecological impacts</th>
<th>Economic and social impacts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Raft, kayak</td>
<td>Bowker <em>et al.</em> 1996; English and Bowker 1996</td>
<td>Park <em>et al.</em> 2002; Green and Donnelly 2003</td>
</tr>
<tr>
<td>Ski/Snowboard</td>
<td>Buckley <em>et al.</em> 2000; Hadley and Wilson 2004; Watson and Moss 2004</td>
<td></td>
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<tr>
<td>Climb, cave, mountaineering</td>
<td>Camp and Knight 1998; Farris 1998</td>
<td></td>
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<tr>
<td>Hiking</td>
<td>Cole 2004; Marion and Leung 2004</td>
<td>Fix and Loomis 1997</td>
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<tr>
<td>Biking</td>
<td>Goeft and Alder 2000; Thurston and Reader 2001</td>
<td></td>
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<tr>
<td>Off-road, ATV</td>
<td>Neumann and Merriam 1972; Vail and Heldt 2004; Buckley 2004a</td>
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<tr>
<td>Wildlife, terrestrial</td>
<td>Beale and Monaghan 2004; Buckley 2004b</td>
<td>Barnes <em>et al.</em> 1999; Wilkie and Carpenter 1999a,b; Archabald and Naughton-Treves 2001; Mvula 2001; Thompson and Homewood 2002; Sekhar 2003; Adams and Infield 2003</td>
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</table>
Table 5. Products, Destinations and Participation in Adventure Tourism

<table>
<thead>
<tr>
<th>Activity</th>
<th>Product structure</th>
<th>Destination summaries, management</th>
<th>Participation rates, types</th>
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</thead>
<tbody>
<tr>
<td>Raft, kayak</td>
<td></td>
<td></td>
<td>Ewert and Jamieson 2003</td>
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<tr>
<td>Ski/snowboard</td>
<td></td>
<td>Fredman and Herberlein 2003</td>
<td></td>
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<tr>
<td>Riding (horse, camel)</td>
<td>Shackley 1996a</td>
<td></td>
<td></td>
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<tr>
<td>Biking</td>
<td></td>
<td>Goeft and Alder 2000</td>
<td>Ewert and Jamieson 2003</td>
</tr>
<tr>
<td>Wildlife, terrestrial</td>
<td>Shackley 1996b</td>
<td></td>
<td>Sournia 1996; Sekhar 2003; Lamprey and Reid 2004</td>
</tr>
<tr>
<td>Wildlife, marine and estuarine</td>
<td>Davis et al. 1997; Ryan 1998; Ryan and Harvey 2000; Wilson and Tisdell 2001; Scott and Laws 2004</td>
<td>Duffus and Dearden 1993; Duffus 1996; Berrow 2003; Parsons et al 2003;</td>
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</tbody>
</table>
References


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