

# North American Idols: Personal Observations on Visitor Management Frameworks and Recreation Research

Wolfgang Haider

Simon Fraser University, Canada

whaider@sfu.ca

North American visitor management frameworks and the closely associated outdoor recreation research paradigm are frequently the envy of recreation researchers and managers in Europe and around the world. In many countries, initiatives have been started to explore the applicability of these frameworks, and an ever increasing number of recreation studies follow the theories, concepts and methods originally developed in North America. In Europe their popularity spread first to Great Britain and Scandinavia, but lately, other European countries also follow that trend. Inevitably questions arise about the applicability and suitability of these methods in many European settings, where the smaller scale of administrative units, national boundaries, and cultural as well as natural landscapes constitute management challenges to the unconditional roll-out of these frameworks. I will reflect on the relationship between the frameworks and recreation research, attempt to identify future trends, and comment on the European situation.

## Visitor Management Frameworks

“Visitor management frameworks provide a systematic process so that managers (or decision processes) are fully aware of (1) the desired future they wish to attain, (2) the alternative routes to the future, and (3) consequences of those alternatives.” In addition, these frameworks provide the explicitness and feedback needed in a time of change, complexity and uncertainty (McCool 2005, p4). They provide land managers and agencies with pragmatic guidance, a standardized approach to management, simplified bureaucratic procedures, and guidance for research and monitoring. They also emphasize the need for public participation,

and the dissemination and presentation of future scenarios and research results to decision makers, stakeholders and the public.

In North America the need to manage recreation activities on public lands emerged during the 1960s and 1970s when increasing affluence and mobility of the emerging post-industrial society created more demand for these kinds of land uses. In response, the public land management objectives changed from sustained yield (with the primary goal to maximize extractive forest uses) to multiple use objectives. At the same time environmental concerns also lead to widespread concerns about the traditional forest management practices, while concerns over conservation lead to the establishment of protected areas (National Parks, Wilderness areas, etc.). These latter places required visitor management in their own right. In North America the focus of these recreation activities and their management is on huge tracts of public land, administered by large land management agencies who are in need of homogenous management approaches.

Early challenges of recreation management were driven by simply questions of carrying capacity: “How much recreation use can be accommodated without threatening the preservation and conservation concerns of parks and protected area” (Manning 2004), or other commercial uses on public land? It became apparent quickly, that a simple supply side management approach was insufficient, because carrying capacity is a function of management actions, and in the case of human activity is influenced by the desired experiences. This recognition gave rise to the notion of a spectrum of recreation opportunities,

and lead to more complete frameworks following a rational planning philosophy. At the core of most frameworks are the following stages:

1. Formulation of management objectives that are expressed by quantitative indicators and standards of quality.
2. Monitoring of indicator variables to determine their condition relative to standards of quality.
3. Application of management actions to ensure that standards of quality are maintained.
4. Most frameworks suggest that public participation guides the entire implementation.

Indicators are measures of resource or social conditions, which should be measured cost-effectively and accurately; should reflect some relationship to the amount or type of use occurring; social indicators should be related to user concerns; and must be responsive to management control. Typical examples of widely used indicators are water quality, soil compaction, or number of encounters.

Standards express the level of the indicator beyond which change is unacceptable. Standards may reflect existing conditions or future targets. Regarding encounters with other users, one may desire to manage a trail for no more than  $x$  encounters with other hikers per day. Standards may be homogeneous throughout one management area, or may differ between zones. Standards are the crucial concept for the operationalization of a framework, and in many situations a standard is formulated around the concept of 'acceptability'.

Finally, monitoring determines when and where management action is needed in order to maintain standards of quality, and also provides means for revision and improvement of standards. The application of a framework is not an end in itself but an iterative process fitting the spirit of adaptive management (Walters 1986).

These frameworks differ by their specific purposes and/or agency needs, and are strongly influenced by the ability of managers to share power with stakeholders, or vice versa the desire of stakeholders to do so (Newsome et al. 2003). The Limits of Acceptable Change (LAC) framework (Stankey et al. 1985) has been proposed as the fundamental visitor management framework for wilderness areas, and

also includes an ROS component (Clark & Stankey 1979) for larger scale zoning. It also served as a blueprint for the later frameworks. The Visitor Impact Management (VIM) framework (Graefe et al. 1990), developed for the US Park Service has a stronger emphasis on impacts and a more top-down agency driven management approach. The Visitor Experience and Resource Protection (VERP) framework (Manning 2001, US Dept. of the Interior 1997) suggests a focus on parks purpose and management objectives, and advocates a strong public participation strategy. Parks Canada experimented with a more activity focused framework, the Visitor Activity Management Process (VAMP) (Nilsen & Tayler 1997), and is currently developing an experience based framework. The only major adaptation of a visitor management framework outside of North America produced the Tourism Optimization Management Model (TOMM) (Newsome et al. 2003) in Australia, which is focused on the complexities of a tourism destination, including private entrepreneurship. No detailed description of the various frameworks will be provided here, as they are readily available in published texts (e.g. Newsome et al. 2003).

Below I will explore the relationship between these frameworks and research. Modern management principles such as ecosystem management (Grumbine 1994) and adaptive management (Walters 1986) emphasize the importance of research in resource management in general, and visitor management frameworks should function in a similar manner. Many links between these visitor management frameworks and recreation research are fairly obvious, but explicit comments about them are rather scarce.

## Recreation Research

Usually outdoor recreation research is associated with a fairly distinct research tradition and body of literature, which has its root in North America and is heavily influenced by social psychological theory, concepts and methods. During the beginnings of recreation research in the 1960's it became apparent very quickly that a focus on the management of supply (i.e. opportunities) was insufficient. Instead, the notion of a triad between

opportunities, activities and experiences was conceived, which is crucial to the first visitor management framework, the ROS. Thus, the importance of social sciences was apparent to managers and academics alike, and led to the pivotal position of social psychology as the arguably most influential discipline of early outdoor recreation research (e.g. Driver 1976). This way of thinking directed early recreation research to specific recreation related topics and theories such as research on crowding, recreation conflict, displacement and product shift, recreation specialization, and the application and adaptation of more general social and or psychological concepts such as satisfaction, motivation, and norms and standard research. By the time the visitor management frameworks were conceptualized, a paradigm of outdoor recreation research was well established (see below) and obviously the same group of researchers was highly influential in the development of these frameworks.

In short, within 15 years, a strong recreation research 'paradigm' had established itself with a sound theoretical base, an important set of applied research questions, continued agency need and support for research, academic based training of students who would grow into these agency jobs, and a peer reviewed literature lead by such journals as *Journal of Leisure Research* and *Leisure Sciences*. Even though these journals carried surprisingly few publications about frameworks, the recreation research 'paradigm' propagated by these journals continuously influenced decisions of framework guided management processes (e.g. norms research on crowding). Before moving into a discussion of outdoor recreation research paradigm and the recent trends and future options, I would like to present Kuhn's concept of the scientific paradigm and its evolutionary processes, and then discuss outdoor recreation research within Kuhn's framework.

## Recreation Research as a Scientific Paradigm

The notion of a research paradigm has been introduced by Kuhn in 1970, and he observed four stages in the progression of science:

1) Normal science is conducted over a long period of time by a group of scientists forming a distinctive discipline, working within a paradigm, and accepting a self-imposed framework of theory, objectives, and techniques. This acceptance is what Kuhn means by tradition-bound. Scientists are using theory, not challenging it.

2) Appearance of discrepancies within the paradigm. These are observations of experimental results at odds with the propounded theory rather than expanding or amplifying it. There may be no immediate attempt to change the theory in order to accommodate these discrepancies.

3) A revolutionary period, short compared to the period of normal science, during which discrepancies are resolved in a new theory. The new theory is generated from outside the established practitioners of the normal science rather than logically developed from within the group.

4) Solidification of the new theory into a new paradigm, which gathers new adherents. The new group of scientists then proceeds to conduct another period of normal science. Research under the old paradigm may continue – but at a reduced level of activity – and it eventually ceases. (Kuhn as quoted in Ford 2000, 312)

According to Kuhn's observations, by the late 70s / early 80s recreation research carries most of the traits of a mature paradigm in a place where none existed 15 years earlier. It represents a clearly defined applied academic discipline, offers well established academic programs, relevant journals, and pursues a wide range of applied research questions that follow the paradigm.

Now, 25 years later the question may be asked if the paradigm is still intact as it was originally, if it has changed gradually, or if indications towards a serious and radical paradigm shift can be observed. First, there are definitely a number of indications of a healthy paradigm of 'normal science', as described by Kuhn's Stage 1.

- The theoretical basis of outdoor recreation research which draws heavily from social psychology and some related disciplines has, and still is, making important contributions. The

theories which are, in Kuhnian terms, slowly advancing and are repeatedly applied and tested, are as relevant today as they were initially.

- The fact that the field came together so quickly and withstood the test of time reflects a need for this research. The paradigm now represents a fairly standardized field of inquiry, which provides important continuity for agencies as the main users of this applied research.
- Certain areas of outdoor recreation research have seriously influenced the design and implementation of visitor management frameworks; for example the entire area of norms based research, especially in the area of perceived crowding.
- The two major journals of outdoor recreation research, *Leisure Sciences* and the *Journal of Leisure Research* have become the main outlets of the academic work, and continue to thrive. They have shown a certain capacity of adaptation by expanding the scope of theoretical coverage, most notable into the qualitative and post-modern research 'revolution' of the 1980s and 1990s.

However, one can also observe a number of discrepancies (Stage 2), to say the least. Arguably, these discrepancies do not affect the theory or theories per se, but are predominantly methodological, and also pertain to other aspects of the modus operandi of recreation research.

- One main discrepancy appears with the research methods applied. Even today, the majority of research in outdoor recreation relies on methods developed during the 1970s in conjunction with the theoretical aspects of the paradigm, and ignores recent methodological advances. For example, the classical research on attitudes, values and preferences, using single item scaling, is still widely used today. It is fundamental to the academic process of testing and re-testing of many of the theories, and provides great insights into various behavioral antecedents. However, when it comes to predicting human behavior, as is the explicit goal of the theory of reasoned action (Ajzen and Fishbein, 1980), the link from attitudes to intended behavior an actual behavior is rather tenuous. Significant methodological progress with various multivariate methods (i.e. revealed and stated preference/choice modeling) finds its way into the core recreation literature surprisingly slowly.
- The main recreation journals appear to scrutinize submissions predominantly for their theoretical contribution, or at least for a sound theoretical basis of the applied research presented. Inevitably, such a screening mechanism precludes top level peer reviewed debate on important management questions, on the application of frameworks, and other legitimate issues associated with applied research.
- The heavy emphasis on theory testing within a case study context makes a conceptual debate challenging, because contributions without an empirical component have a much lower chance of acceptance.
- The focus on theory also precludes serious methodological debate, especially about emerging methods, as well as their rapid dissemination. This barrier affects methods pertaining to research on theories, and even more so methods and concepts which might be important for practitioners or in the implementation of management frameworks (i.e. monitoring). For example, Manning (2004) points out that "there is little guidance to be found in the professional and scientific literature on cost-efficient and effective monitoring approaches and techniques."
- The main journals remain largely closed to an expanded set of research questions, approaches and solutions, which frequently appear in the management context. Besides monitoring and enumeration issues, the 'classical' literature rarely covers articles containing GIS or GPS applications, or any state-of-the-art more sophisticated modeling approaches. The last few issues of the major journals might indicate the overdue departure from this point of critique, as several papers contain state-of-the-art methods, albeit mostly embedded in traditional theory.
- Consequently, it comes of little surprise that many important papers on recreation are published outside the traditional domain of recreation research. For example, a large number of papers on recreational fishing by leading resource economists can be found in the resource

economics literature. Unfortunately, these papers are written for the purpose of developing economic theory and/or modeling, and cater to a very different audience, going largely unnoticed by recreation managers, and even by many of the recreation researchers (for a summary see Hunt 2005).

If one evaluates the visitor management frameworks through a similar lens, a somewhat different picture emerges. Many applications of these frameworks by many jurisdictions across North America as well as occasional applications elsewhere have taken full advantage of state-of-the-art methods and techniques. Public participation processes and information dissemination are further enhanced with web-based technology, GIS based maps summarize information, and visualizations of possible future scenarios further debate (see the LAC sites for the Daniel Boone National Forest for an example (<http://www.fs.fed.us/r8/boone/lac/>). Occasional negative examples of framework applications also exist, in which an agency uses the framework merely as a prescriptive management or inventorying tool (e.g. the ROS in British Columbia).

This observation of a dynamic and innovative environment around the visitor management frameworks, contrasts with the rather conservative mode of conduct of 'normal science' within classical recreation research. Maybe this discrepancy in itself indicates a paradigm shift, and the answer will depend on a precise definition of the term paradigm. In my opinion, these observations signal a significant expansion of recreation research, towards much more interdisciplinarity. This shift seems to be driven more by the practitioners than by the established researchers. In all likelihood, academics will remain in respective niches, but managers ought to embrace these new opportunities and become much more interdisciplinary in their outlook. Apparently outdoor recreation research is morphing into a much larger endeavor than the classical lens alone would suggest.

### Future Research Directions

Manning (2004) lauds the frameworks "for making the trade-offs inherent to the management issues transparent on a conceptual basis." McCool

(2005) observes "a growing need for frameworks and concepts that assist decision makers in assembling a set of informed alternatives and evaluating them."

To this I would add that conceptual transparency of trade-offs is certainly an important trait of public processes, but by now social science methods exist which can contribute to this need more explicitly. And McCool's jargon actually reflects the language of decision analysis, without making any further use of it. Taking advantage of these techniques should represent the next logical step in the development of these frameworks. It would bring the social science contributions to the decision making processes on par with the natural science information, and decision makers and stakeholders alike will work with values and trade-off positions of the various interest groups explicitly, instead of relying on anecdotal evidence of round tables.

Decisions support tools can be based on revealed and/or stated choice models which document the trade-off positions of user and stakeholder groups. A more formal framing of a decision problem along a decision analysis concept would provide a tight framework for monitoring, data collection, analysis, and a formal track record of decision making. Yet hardly any applications of decision analysis in recreation management in general or visitor management specifically exist (for a first attempt see Rudolphi & Haider 2003).

Closely related is a move towards integrated modeling, in which ecological, managerial and recreational information are organized in a related manner, and subcomponents of the respective models influence each other. It is conceivable that social science information on values and trade-offs be collected in such a manner that it can be applied in spatially explicit GIS models.

Are these North American Visitor Management Frameworks Applicable in Europe?

As I have claimed in the beginning, in Europe these types of frameworks are – with some exceptions- absent. With the exception of some attempts in Scandinavia, no visitor management frameworks have been applied in Europe to this day. The most obvious explanation might be that they simply were not known due to language bar-

riers, which prevented many practitioners, and to a lesser extent academics, to delve into the relevant North American literature. However, that would be too simplistic. Instead the main causes seem to be of a legal and structural nature, as well as a very different research environment.

The different land ownership structure seems to be crucial. While North America contains huge amounts of public lands, only some regions in Europe, most notably in Scandinavia have a similar dominance of public land ownership. In the remainder of Europe land ownership is a much more complex patchwork of private and several layers of public owners, leading to a much more diverse management structure which is much less conducive to rolling out generic management frameworks. Instead, one finds a diverse set of locally adapted, and sometimes unique, planning applications. Access to recreation opportunities should also be considered, which seems to be more readily available in most European nations compared to North America. In Scandinavia, the 'everyman's right' provides ubiquitous recreation access on all land. And in most continental European countries, various blends of legislation and local customs provide wide recreation access. In tourist areas, such as the Alps, the importance of recreation and scenic services over forestry have long been decided in favor of recreation. The combination of already established broad public recreation access and many private landowners is not very conducive to recreation management frameworks.

At the same time, Europe has developed very different types and notions of protected areas, which lead to different planning approaches. In North America, significant portions of land (up to 10-12% in many jurisdictions) are protected from most commercial uses in parks. Consequently, they designed their own recreation management approaches. In Europe, on the other hand, strict protected areas are few, while nature parks, landscape protection areas, and Natura 2000 allow many other land uses. Furthermore, throughout Europe, regional identity is of utmost importance, especially in the more peripheral areas which serve as the prime recreational and tourism areas. This regionalization requires more specific local planning and management solutions. Many European planning

processes have applied some of the quintessential components of the visitor management frameworks already - sometimes deliberately, sometimes coincidentally, as they simply followed a common sense approach. Many of these applications have grown organically out of the respective processes, and throughout Europe, public participation and the use of standards have become widespread planning and management tools with or without an explicit framework. For example, the EU-directive governing Natura 2000 areas mandates public participation for the management planning process. Its implementation varies enormously between various jurisdictions.

The restructuring of academic institutions throughout Europe has introduced a much more competitive environment, in which researchers must compete internationally for grants and for publications in the peer reviewed literature. Many of these researchers, and their students who eventually end up as managers, did not get trained in the classical recreation research paradigm, and might therefore be much more open to innovation and to state-of-the-art research approaches with focus on the research goals. Hence European research has an opportunity to establish itself on par with North American research.

In summary, given these discrepancies between European and North American approaches to and traditions in recreation management and research, further exchange of ideas between these positions will be beneficial to both parties.

## References

- Ajzen, I. & Fishbein, M. (1980). *Understanding Attitudes and Predicting Social Behavior*. Englewood Cliffs.
- Clark, R.N. & Stankey, G.H. (1979). *The Recreation Opportunity Spectrum: A Framework for Planning, Management and Research*. Gen. Tech. Report PNW-98. Portland.
- Driver, B.L. (1976). *Towards a Better Understanding of the Social Benefits of Outdoor Recreation Participation*. Ashville.
- Ford, D.E. (2000). *Scientific Method for Ecological Research*. Cambridge.
- Grumbine, R.E. (1994). What is ecosystem management? In: *Conservation Biology* (8/1), p 27-38.

- Hunt, L. M. (2005). Recreational fishing site choice models: Insights and future opportunities. In: *Human Dimensions of Wildlife* (10), p 153-172.
- Manning, R. (2001). "Visitor experience and resource protection: A framework for managing the carrying capacity of national parks." In: *Journal of Park and Recreation Administration* (19), p 93-108.
- Manning, R. (2004). Recreation Planning Frameworks. In: M. J. Manfredo, J.J. Vaske, B.L. Bruyere, D.R. Field, P.J. Brown (eds.). *Society and Natural Resources – A Summary of Knowledge*. Prepared for the 10th Intl. Symposium on Society and Resource Management. Jefferson.
- McCool, S. (2005). Outdoor recreation in the new century: frameworks for working through the challenges. Presentation at the 2005 Society of American Foresters National Convention, October 19-23, Ft. Worth, TX.
- Newsome, D., Moore, S.A. & Dowling, R.K. (2002). *Natural Area Tourism – Ecology, Impacts and Management*. Clevedon.
- Nilsen, P., & Tayler, G. (1997). A comparative analysis of protected area planning and management frameworks. In S.F. McCool and D.N. Cole (eds.) *Proceedings of a Workshop on Limits of Acceptable Change and Related Planning Processes: Progress and Future Directions*, University of Montana's Lubrecht Experimental Forest, Missoula, MT, May 20-22, 1997, p 49-57. Odgen.
- Rudolphi, W. & Haider, W. (2003). Visitor management and ecological integrity: one example of an integrated management approach using decision analysis. In: *Journal for Nature Conservation* (11), p 346-354.
- Stankey, G.H., Cole, D.N., Luca, R.C., Petersen, M.E., Frissell, S. (1985). *The Limits of Acceptable Change (LAC) System for Wilderness Planning* (Gen. Tech. Report, INT-176. Odgen.
- US Dept. of the Interior, National Park Service (1997). *VERP – Visitor Experience and Resource Protection (VERP) Framework – A Handbook for Planners and Managers*. Denver.
- Walters, C. (1986). *Adaptive Management of Renewable Resources*. New York.