The Lillehammer Scales:

Measuring Common Motives for Vacation and Leisure Behavior

Jo Kleiven

Dissertation for the degree doctor philosophiae (dr.philos.)

at the University of Bergen

2009

Dissertation date: 08.10.09

Scientific environment

Faculty of Health and Social Work

Lillehammer University College

N-2626 Lillehammer, Norway

Acknowledgements

The work to be reported here was not originally planned as a coherent research effort. As studies evolved and interesting results materialized, however, help and encouragement inspired me to raise my sights. I therefore wish to express my sincere gratitude to a number of people and institutions.

Over a period of years, a league of gentlemen associated with the 'Jondal seminars' has provided inspiring discussions, thoughtful critique, and positive encouragement. Dag Hammerborg, Bjørn Ellertsen, Jon Christian Laberg and Helge Nordby have all contributed to the socially pleasant and intellectually stimulating seminar environment. Tom Backer Johnsen, however, deserves special mention. By regularly introducing seminar members to recent developments in research methods and data analysis, he has made indirect but essential contributions to my research.

Leif E. Aarø at the University of Bergen provided welcome encouragement at an early stage. Nina K. Prebensen, presently at the The Norwegian College of Fishery Science, University of Tromsø, also proved a very capable and stimulating discussant. Even at times when my energy and spirits were low, she managed to keep our co-publication efforts on the rails.

By providing two research terms, Lillehammer University College has made a significant institutional contribution to my work. I also appreciate the interest and encouragement of former colleagues at the Travel & Tourism unit at the College. Hans Holmengen, Thor Flognfeldt, Christer Thrane and Martin Rønningen even took the trouble of testing my scales in several student surveys.

This research was also supported by the *Tourism Research Program* of the Norwegian Research Council, through a grant to my project *Motive dimensions as demand predictors in Norwegian Leisure and Tourism*. This support was truly instrumental to the completion of the project.

Last, but not least, I wish to thank my wife Ingrid for her patience over a number of years. The time spent on this extensive project has undoubtedly gone at the expense of family and domestic activities. Fortunately, we still have a number of vacation and leisure motives in common.

Lillehammer, September 2008

Jo Kleiven

List of tables and figures

Tables: *Page*

Figures:

Abstract

Eight Norwegian leisure and travel motives are identified and partly employed in five different surveys. Four of the motive dimensions *(Culture*, *Friends*, *Accomplishment* and *Peace/Quiet)* may be viewed as conceptual replications of Beard & Ragheb's (1983) influential Leisure Motivation Scales. Based mainly on related Norwegian research, four additional dimensions were added: *Sun/warmth*, *Family*, *Nature* and *Fitness*.

Both 'conventional' and SEM-based analyses were valuable in assessing the data. All motive dimensions were measured by four-item summed scales, and Cronbach alphas generally suggested fair to good reliability. Neither ceiling nor floor effects were evident. CFA on separate scales also gave encouraging results, but suggested that "Congeneric" measurement models (Pedhazur & Schmelkin, 1991) should be preferred to "Tau-equivalent" and "Parallel measures" versions.

Among the eight motive dimensions, *Peace/Quiet*, *Family*, *Friends* and *Nature* generally appear to be slightly more important than *Culture*, *Fitness*, *Accomplishment* and *Sun/Warmth*. Data also suggest extensive socio-demographic variation in scale scores, which should receive closer attention in future research.

Attempts at assembling the full set of scales into a composite measurement model were less successful. However, useful insights were gained from this modeling. Clearly, some scales are highly correlated, indicating that orthogonal dimensional models are not likely to prove useful. Also, acceptable model fit could often be achieved through small and relatively trivial modifications that did not alter the basic structure of the model.

Measurements on most scales were shown to be relatively stable, not changing much from before to after vacation trips. Diverse alterations and modifications of scales and scale items appear not to change results much, suggesting fairly robust

procedures. A Norwegian standardization was also undertaken, providing a nationally representative basis for comparing and assessing future research using the scales.

Preliminary work on the scales' validity yielded promising results. Some scale scores were highly correlated with certain leisure behaviors, suggesting simple concurrent validity. Scales also contribute to leisure predictions in larger MIMIC models that include relevant socio-demographic variables. The eight motive dimensions and their measurement scales may accordingly prove useful to future research on vacation and leisure choice in the Norwegian population. Although not put to a formal test, the basic assumptions underlying this research are largely consistent with the results obtained.

List of publications

The present thesis is based on the original papers listed below. The papers are included as an appendix, and will be referred to by their Roman numerals:

I. Kleiven, J. (2005). Measuring Leisure and Travel Motives in Norway — Replicating and Supplementing the Leisure Motivation Scales. *Tourism Analysis, 10*(2), 109-122.

II. Kleiven, J. (2006) Eight Scales for Leisure Travel Research — Replicating and Revising the Lillehammer Scales. *Research Report 131/2006*. Lillehammer: Lillehammer University College.

III. Prebensen, N. K., & Kleiven, J. (2006b). Stability in Outbound Travel Motivation: A Norwegian Example. *Tourism Analysis, 10*(3), 233-245.

IV. Kleiven, J. (2000). Leisure Motives as Predictors of Activities: The Lillehammer Scales in a National Survey. In J. Ruddy, & S. Flanagan (Eds.), *Tourism Destination Marketing: Gaining the Competitive Edge* (pp. 65-73). Dublin: Tourism Research Centre, Dublin Institute of Technology.

V. Prebensen, N. K., & Kleiven, J. (2006a). Determined Sun-Seekers and Others — Travel Motives, Holiday Type, and Holiday Behavior Among Norwegian Charter Tourists. *Journal of Hospitality and Leisure Marketing, 14*(1), 75-97.

Contents

1. INTRODUCTION

1.1 A lasting personal interest

Several winters ago, I spent considerable time in pleasant environments with tourism students of Lillehammer College, interviewing Norwegian 'Snowbird' tourists about their present vacation (Kleiven, Holmengen, & Jacobsen, 1991). Among several themes covered in that survey was peoples' *reasons* for going south for a winter week. Naturally, the most frequent response pointed to *climatic change* as the 'popular' reason for this particular trip. Nonetheless, interesting complexities turned up in many personal interviews.

Quite a few people reported other reasons behind their vacation choice, and not all destinations (Canary Islands and Gambia) yielded the same pattern of travel reasons (Op. cit.). Moreover, some respondents viewed their travel reasons as personally important, central to their lifestyle and identity. Others, however, indicated no strong involvement in either vacation choices or reasons for destination preferences.

At that time I was neither interested nor prepared to handle this apparent complexity, and had to contend myself with simple questions and limited responses. The candid conversations with vacationers did leave me with a lasting interest in the matter, however. The question of *why* people choose specific leisure and vacation activities is intriguing, and has made me wonder about the goals, reasons, interests, aims and expectations people have when making such choices.

Certain concepts and insights from psychological motive theory are relevant to this interest, and will be briefly discussed in the next sub-chapter (1.2). However, also *applied* research on travel and leisure motives is relevant to our interests, even though it may not relate explicitly to psychological motive theories. Sub-chapter 1.3 contains

a short discussion of this research. The last sub-chapter (1.4) discusses research challenges and questions that have been central to the present research effort.

1.2 Some psychological perspectives on motives

In my English dictionary (Hornby, Gatenby, & Wakefield, 1963), 'motive' is defined as *"... that which causes somebody to act."* This very broad common-sense concept also appears to be reflected in psychological literature, where the topic of 'motives' is indeed a wide one. Although the concept of 'motives' is old and well known, it does not point to a unified field of research. Several theories and models have competed over the years in explaining the 'why' of human intent and behavior (Weiner, 1992; Geen, 1995).

1.2.1 Competing metaphors

Drawing on philosophical history, Weiner (op. cit.) identifies two major modes of thought. The first, “The Machine Metaphor”, basically views man as a “mechanical” system, subject to influence by forces and energies from the outside. Psychoanalytic, socio-biological, drive, and Gestalt theories are some examples of motivational concepts and theories that accept *"... some aspect of the machine comparison..."* (Weiner, op. cit. p. 17). Some of these theories have a biological basis, assuming bodily processes and reflexes to be important to both human and animal behavior. Freudian psychology also discusses a human 'system' with given characteristics, focusing on how it handles certain basic urges. Even the once influential drive theory (Hull, 1943) may be viewed as leaning towards the 'machine metaphor'. Here, behavior follows the drive without assuming any intervening thoughts, and reinforcement occurs as a *"... mechanical strengthening of response tendencies"* (Geen, 1995, p.15).

The machine metaphor, however, should not be taken to represent only a simple or reductionist view of human motivation or behavior. Firstly, Weiner (op. cit.)

repeatedly warns his readers about the limits of this metaphor. While it calls attention to a few selected sides of human behavior, it should not be taken to imply that people are just like machines in other ways. Secondly, theories in this field have accounted rather well for behavioral plasticity. Also, the metaphor has proven useful over a great range of interests. Summing up the development in motive research over more than 20 years, Weiner still argues that *"... a mechanistic theory can parsimoniously account for some of the vast variety of data that is generated, although other aspects of human behavior must be examined with other metaphors"* (Weiner, p. 151).

Another metaphor may indeed be closer to the concerns of the present project. The “Godlike” metaphor views man as having a mind of his own, being very knowledgeable and capable of rational thinking (Weiner, op. cit.). Cognitions — beliefs, thoughts, intentions, and expectations — are viewed as not only *existing*, but also as *important* to the peoples' choices of actions.

Several types of motivational theory are consistent with this approach. Tolman (1932) was an early proponent of this mode of thought, viewing goals and intentions as more important to behavior than Hull's drives and reinforcements. More recent influential developments have been, e.g., Rotter's Social Learning Theory (Rotter, 1954), Atkinson's Theory of Achievement Motivation (Atkinson, 1964), and Vroom's (1964) Expectancy-value theory.

Interested in *work* motivation specifically, Vroom (1964) made an early distinction between 1) the expectancy of being rewarded and 2) the value of the reward. Both variables are viewed as important to work behavior and job satisfaction, both contributing to the relative strength of 'forces' underlying a behavioral choice. And, in Vroom's own words, *"... Each force is in turn hypothesized to be equal to the algebraic sum of the products of the valence of outcomes and expectancies that the outcomes will be attained"* (Vroom, op. cit., p. 28). Further elaborations on this theory have been made by Porter and Lawler (1968). It has been pointed out, however, that a rather advanced rationality is assumed in this approach, including the ability of adequately processing complicated 'value' and 'expectancy' information. Some

research suggests that more modest assumptions should be preferred (Zedeck, 1977; Slovic, Fischoff, & Lichtenstein, 1977; Stahl & Harrell, 1981). Geen (1995, p. 28) still believes, however, that *"... The expectancy-value approach to motivation may therefore have some validity, but it is not a simple and sovereign theory."*

1.2.2 Intentional behavior and cognitively available motives

Expectancy-value theory is by no means the only psychological approach with a focus on cognitive goals. The influential "Plans and the Structure of Behavior" (Miller, Galanter, & Pribram, 1960) convincingly argued that *behavior may have a purpose*. People often have reasons for their actions, and accordingly plan their behavior before actually performing their actions. The question of *why* certain activities are planned and performed is often interesting; and many words and concepts aim at covering this aspect of behavior. *Motives* is one commonly used term for this, as are *hopes, aims, expectations, beliefs, attitudes, values, objectives, benefits, drives, rewards expected* and *'operant reinforcements'*. Clearly, this aspect of behavior has been approached in various ways — even within the discipline of psychology. In spite of different labels and disguises, a motive or intention theme commonly appears.

A closely related question is the issue of cognitive availability or intervening consciousness related to motives. It is not uncommon that people are able to think about, evaluate and discuss the reasons or intentions behind their behavior. The ability of self-reflection — commonly believed to be central to the human species — may include the ability to consider and evaluate the reasons for our own behavior.

Of course, this capacity of understanding our own motives and actions is *limited*, and numerous examples of this may be cited. This will be the focus of the next sub-chapter.

It should be clear, however, that a focus on purposive or intentional behavior does *not* imply that interesting motives or reasons is a *sufficient* explanation of *all* behavior. Even though intentional behavior is a main interest, one should not expect

the relationship between cognitively available motives and behavior to account for everything of interest.

1.2.3 Beyond the simple motive – behavior link

Ever since Freud (1960), psychoanalysts have been pointing out the shortcomings of peoples' insight in their own strong and unrecognized *desires and emotions*. But emotions are only one of several threats to cognitively available human judgment.

1.2.3.1 Unconscious motives

Psychoanalysis not only pointed out that unconscious motives do exist, but also argued that such motives actually may influence behavior. The sex motive is viewed as an important determinant of behavior, even with individuals who do not recognize its existence. Even today, people commonly do not think clearly or speak openly about such desires. This should not be taken to mean, of course, that sex drives do not influence behavior.

Another, perhaps less controversial example is the common wish to impress the neighbors. While we clearly anticipate a new car, an attractive partner or an expensive holiday to impress other people, not even in private do we necessarily recognize the existence of our wish to impress. Social psychology has shown in several different ways how self-attribution and social cognition may yield quite biased cognitions, and self–serving biases and attempts at cognitive consistency are prone to producing errors (Fiske & Taylor, 1991).

Of course, not all motives outside our awareness have been placed there by repression or other psychodynamic mechanisms. Also simple forgetting or other mundane processes may cause a wish or a need to stay outside the conscious sphere. In such cases, non-conscious motives may well be a more appropriate term. Nonetheless, unconscious (or non-conscious) motives may have a place in extended models covering more than cognitively available motives, constituting a methodological (and perhaps ethical) challenge to research.

1.2.3.2 Intrinsic motives

Another interesting psychological perspective on motives is the phenomenon of *intrinsic motivation* (Csikszentimihalyi, 1975). Certain activities are performed because they are fun and rewarding in their own right, not primarily because of other, "external" reasons. Activities with an appropriate level of difficulty can be very stimulating and intense. Such behavior frequently leads to a "flow experience", where the strong focus on the activity makes the actor forget most other things. These processes are highly relevant to the understanding of leisure activities and travel, implying a view of motives that is clearly different from the simple motive → behavior model. The "flow" experience is not necessarily the initial reason for planning or starting an activity, but may serve to sustain it.

The intrinsically rewarding experience of "flow" may occur during behavior that was initiated for other reasons (Deci & Ryan, 1987). The existence of 'flow' and intrinsic motives, therefore, does not exclude the simultaneous operation of other, extrinsic motives and influences on behavior (Mannell, Zuzanek, & Larson, 1988).

Rather, this understanding may be consistent with a focus on motivated, planned behavior. If stimulating activities that lead to "flow" are known to a person, he may well become motivated to have this experience again, and to consciously plan for it. If that is the case, the "flow" experience constitutes a goal that is cognitively available.

In any case, flow experiences and intrinsic behavior are highly relevant to leisure and vacation. As Iso-Ahola (1989, p. 268) puts it: "*Intrinsic motivation is the heart of leisure behavior"*.

1.2.3.3 Cognitive capacity

Quite early in the history of cognitive psychology, George A. Miller (1956) addressed the limited *cognitive capacity* of human actors in his influential article on "The Magical Number Seven …" Also Broadbent (1958) demonstrated definite limits to the human capacity of information processing in his "filter" model.

In complex decisions involving large amounts of information this limited capacity and the related need to simplify matters may be important. Consequently, limited cognitive capacity may worth including in larger models of such processes.

1.2.3.4 Constraints and barriers

Not all wishes or motives lead to plans — nor to successful behavior. Plans may be thwarted, obstacles occur, different people may have conflicting plans, and conflict and frustration may result. Simply put, *factors that are external to the motive – behavior model* may strongly influence a person's motivated attempts at goal achievement, and not always in a beneficial way. While this may modify or attenuate the effect of motives, it does not contradict the basic motive → behavior model.

Examples of this are abundant in the field of recreation, where there has been a focus on *constraints* or *barriers to leisure* (Wade, 1985; Goodale & Witt, 1989). Also in Norway, psychological, social, cultural and economic factors have been shown to limit peoples' actual access to several types of recreation behavior (Haukeland, 1990; Thrane, 1995). A number of constraints are known, and may be added to *motive – behavior* pathways to form more complex models explaining more of the behavioral variance.

A special constraint that pertains to leisure and vacations is that activities frequently are undertaken in groups, not on an individual basis (Schiffman & Kanuk, 1991). Consequently, a vacation choice may be made for the entire group, and the personal motives of a single group member may or may not influence that decision . Young teenagers and the wives of hobby salmon fishermen will most likely appreciate this point: They may have cognitively available and clear motives, but those motives do not carry much weight in other people's decision process (Thornton, Shaw, & Williams, 1997; Zalatan, 1996).

The constraints problem may be viewed as a parallel to the intention – behavior distinction in The Theory of Planned Behavior (Ajzen, 1991), where "external" factors may influence the strength of that relation. Even if norms, attitudes

and perceived behavioral control produce a strong internal intention to act, mundane external constraints like traffic jams or lack of money may prevent the target behavior from occurring.

1.2.3.5 Personality

The distinction between *psychocentric* and *allocentric* people (Plog, 1987; Plog, 1977) may suggest another addition to the basic motive — behavior model. While Plog's *psychocentric* personalities looked for the safe and *familiar* in their leisure travel, the more adventurous *allocentrics* wanted *new and exciting* experiences. Here, a personality variable is influencing motives. This may be taken as a hint that also *personality variables* could prove useful in a more comprehensive model.

1.2.3.6 Bounded rationality

There is also the question of how to decide between several behavioral alternatives. This may complicate simple motive → behavior models. Working with behavior choice in organizations, Simon (Simon, 1955) introduced the term "Bounded rationality" to cover behavior that was not quite consistent with simple notions of "rational man". Partially building on Simon's insights, Tversky & Kahnemann (1981) identify important limits to rational and intentional cognitive processing, pointing to a number of quick 'heuristic' routines that at times prove more influential than slower and more diligent rational assessments of large amounts of information.

It should be noted that efficient heuristics do not necessarily *replace* the information processing assumed by the "rational man" beliefs. Heuristics and rational deliberations may co-exist, and the balance will sometimes tip in the favor of one alternative, at other times in the other direction. This general approach is commonly referred to as "Dual Process Theory" (Chaiken & Trope, 1999). Needless to say, it implies considerably more complex behavior prediction models than the basic motive → behavior notion.

1.2.3.7 Motives and other influences on behavior

Clearly, psychology abounds with examples that simple motives are not by far the only influence on behavior. More importantly, peoples' representations of their own motives compete with several other influences on decisions about behavioral plans.

The rudimentary motive → behavior idea, therefore, needs to be supplemented with other insights. Emotions may block or bias our available cognitions, insufficient "channel capacity" may limit the access to relevant information, an activity may give rise to unexpected intrinsic motivation, and unfortunate heuristics may take precedence over careful deliberations. The motive → behavior connection is not necessarily simple and straightforward: Existing motives do not automatically lead to the behavior expected from purely rational considerations. While a parsimonious motive → behavior model may be *right* in specifying that motives influence behavior, it is not necessarily *sufficient*. Several additional factors are known to influence behavior and leisure experiences, without necessarily being in conflict with the importance of motives. Hence, models including additional influences may be useful for correctly assessing the power of motives.

A parallel may be drawn to the neighboring field of attitude – behavior relations. In this field of research, other variables are commonly added to the basic attitude – behavior relationship, forming more complex models with improved predictive power. A well-known example is The Theory of Planned Behavior (Ajzen, 1991), including "perceived behavioral control" but still retaining the pathway of *attitude – intention – behavior* as a central feature (Cf. Eagly & Chaiken (1993)). Similarly, motive differences may account for only part of the variance in leisure behavior. Additional variables must also be expected to contribute.

1.2.4 Modeling behavior influences

Several factors, then, challenge the simple motive → behavior model. At first glance, some of these may even appear to invalidate our belief in the importance of 'normal' cognitive functions. The Bounded Rationality and the Dual Process conceptions, e.g., imply cognitive processes far more complex than what is rendered in the basic motive → behavior relation. False attributions and biased perceptions do not convincingly support the simple concept of motives causing behavior. In view of this complexity, the basic model may appear as inadequate and in danger of becoming irrelevant.

But the different points of view are not necessarily incompatible. These other factors could be viewed as interesting *exceptions, additions* or *limitations* to the basic motive → behavior relationship, and not as a complete and consistent alternative model of human cognition. In that case, the phenomena mentioned could co-exist with motives in future models, all contributing to a comprehensive understanding of what causes behavior.

And in my view, inclusions as well as exclusions of variables in prediction models should be *empirically* founded. This implies that *a priori* beliefs about relevant variables can not overrule statistical testing of potential model components.

Clearly, if motive scales show predictive or concurrent validity in relation to certain behaviors, such scales will be candidates for inclusion in models to predict these behaviors. Also, if scales loose their predictive power within models also containing other independent variables (e.g., demographics, cognitive complexity or available heuristics), they are less likely to be included in such models. And conversely, if motive variables as well as other variables can be shown to contribute to prediction models, complex models containing both types of variables are likely to be needed. If so, neither set of measures will prove that other variables are irrelevant.

As long as people's cognitively available motives are shown to be relevant to their choice of behavior, then, motive scales may be considered for inclusion in

predictive models. A wide range of such models may be imagined, where motive measurements could contribute.

Hopefully, therefore, some of these 'other' factors may be used as *model additions* in the future, to form more ambitious composite models of what influences people's choice of leisure behavior. Although such model construction is not a main purpose of the present work, some potentially relevant parts of models emerged from our attempts to validate the motive scales.

1.2.5 Measuring motives

Psychological variables commonly represent "hypothetical constructs" that are not directly observable. A large number of psychological tests and measurement procedures have been developed to provide information about the state of such constructs.

Central to psychological research, therefore, is the belief that measurements are important. As a recent review of motivation measures puts it:

> *"…A key element of any field of psychological study is how the target concept is measured. Measurement defines the limits and progress of a field, demarcating what the psychologist can study, and, simultaneously, reflecting current thinking about a topic"* (Mayer, Faber, & Xu, 2007, p. 83).

1.2.5.1 Seventy years of psychological motive measurements

Based on a survey of PsycINFO and a query about researchers on a SPSP Listserv, a recent review (Mayer et al., 2007) shows a gradual increase in the period 1930–2005 of studies measuring motives – from about 111 to 3086 per decade. More importantly, however, it suggests an interesting shift in the type of motive measures employed in scientific psychology publications. At the beginning of this period, both *general* measures and more *specific* measures of motivation were commonly used; and a use ratio around 1:1 was computed. From 1981 and onwards, however, there was a relative increase in the use of specialized measurement techniques. The use ratio

changed to (1:3), indicating that *context-dependent* measures had become the preferred approach to motivation.

Most likely, this shift also indicates a change of focus away from *general theories* of motivation to more limited, *domain-specific* views. Research on work motivation (Hackman & Oldham, 1975), academic motivation (Pintrich, Smith, Garcia, & McKeachie, 1993), and athletic motivation (Duda, Chi, Newton, Walling, & Catley, 1995) may serve as examples. Also research on leisure and travel motives commonly employs the domain-specific approach to motives and motive measures, as does the present project.

1.2.5.2 Psychometrics and Structural Equation Models

In "traditional" psychometrics, certain tricks of this trade are well researched and well known. Introductory textbooks in psychology like Hilgard's (Atkinson, Atkinson, Smith, Bem, & Nolen-Hoeksema, 2003) familiarize students with basic test concepts like reliability and validity. General textbooks in psychometrics (e.g., (Nunnally & Bernstein, 1994; Lewis-Beck, 1994) commonly offer good advice on the construction and application of tests and measurements, and books specifically covering this type of research are also easy to find (e.g., DeVellis (1991)).

A common measurement technique is the venerable Likert scale, where ratings of several statements are summarized into a single scale score (Likert, 1932). Here, scale items are selected for contributing well to the sum score that constitutes an index of the concept to be measured.

In recent years, however, new ways of data analysis have met with considerable interest in both psychology and other disciplines. Structural Equations modeling (SEM) and covariance structure analysis apparently offer improvements over previous approaches to data analysis. Initially referred to as the LISREL method after one of the first PC programs in this field (Jöreskog & Sörbom, 1993), it has become rather influential.

General methods textbooks now have chapters on this approach (e.g., Pedhazur & Schmelkin (1991)). Specialized introductory texts are also available (e.g., Kline (1998; 2005); Raykov & Marcoulides (2000)), and journals and APA standards have been adjusted to accommodate these new developments. A much broader selection of PC programs are available, like AMOS (Arbuckle, 1997), EQS, (Bentler & Wu, 1993); and MPlus (Muthén & Muthén, 2006). The web-based SEMNET discussion group (SEMNET, 2007) rapidly disseminates updated information on new developments, and also provides expert advice on associated problems and pitfalls.

In this tradition, a distinction is made between *measurement models* and *structural models*. A Likert scale will be viewed as measuring a *latent variable*, through the use of a number of *manifest variables* or observations. The explicit *measurement model* may be carefully scrutinized through a confirmatory factor analysis (CFA). And, since the impact of motives may have to be assessed in a context involving a wider range of influences/variables; full *structural models* may also prove useful to the present research. Also, SEM tests the fit between hypothesized model and the data *directly*, not through testing a null hypothesis with limited credibility. Hence, the SEM approach in general appears worth considering.

Most likely, both traditional psychometrics and covariance structure analysis have much to offer researchers, including those wishing to study vacation and leisure motives. Like most Norwegian psychologists, however, the present author was not very familiar with SEM developments at the onset of the present research. It was tempting, therefore, to use this project as an opportunity to get acquainted with this new approach.

1.2.6 Summing up psychological perspectives

Several psychological approaches have contributed to our general understanding of complexities of human motivation. In the context of travel and leisure, however, the 'Godlike' metaphor of humans and their motivations appears to be the most appropriate. Here, man's cognitive beliefs and conscious expectations are clearly

viewed as important to behavioral choices. The co-existence of several motives is also often assumed, and the domain-specific approach is the most common.

Not only cognitive motives are important, however; other influences on behavior also exist. Some influential motives may not be consciously available, basic personality differences may play a part, and constraints and barriers may prove decisive. More complex cognition models are likely to be needed, and the theories of Bounded Rationality and of Dual Process may be viewed as specific examples of this general point. In this context, both traditional psychometrics and Structural Equation Modeling are likely to prove useful.

1.3 Applied Tourism and Leisure research

Before looking at the treatment of motives in the relevant applied research literature, a quick clarification of some central concepts is in order.

1.3.1 Travel, Tourism, Vacation or Leisure?

Some confusion has arisen from the fact that Travel, Leisure and Vacations are not one and the same. The ambiguous concept of Tourism[1] further complicates matters. While these concepts partly overlap, keeping them apart may nonetheless be important in certain contexts.[2]

An attempt to clarify the relations between the different concepts involved is shown by the Venn diagram in figure 1. Here, partly overlapping circles represent *Travel* and *Leisure*, while a *Vacation* circle is placed within *Leisure*.

[1] In Norwegian, the closest corresponding term is "Reiseliv", another ambiguous term.

[2] Also Mordal (1979) attempted to keep key concepts apart, recognizing that clear and stringent definitions was need to make comparisons across different official surveys and statistics possible.

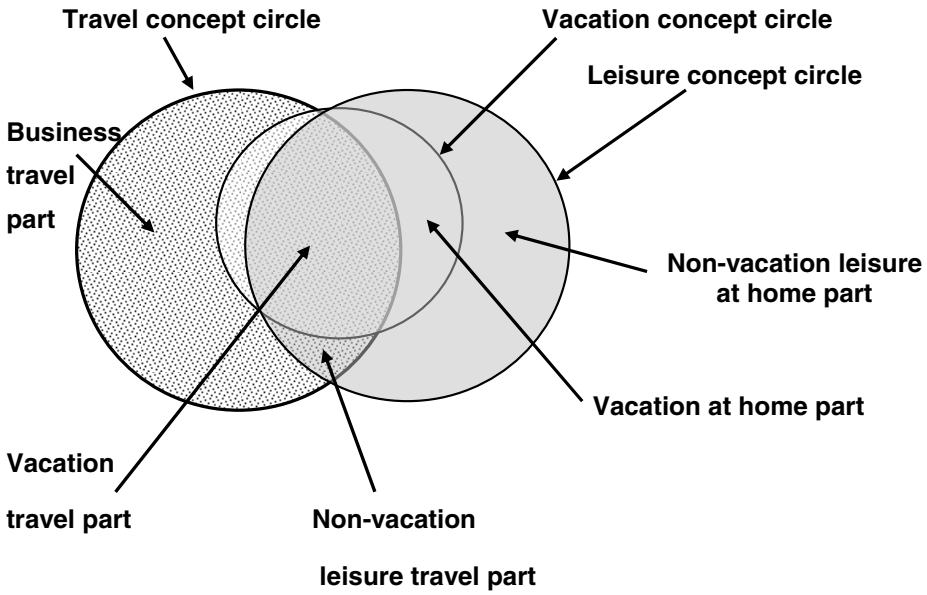

Figure 1. Venn diagram of the concepts of Travel, Leisure, and Vacation[3]

The diagram will, however tediously, serve to illustrate the following points:

1. The concepts of *travel* and *leisure* are partly overlapping. Some travel implies leisure, some leisure involves travel, and the intersect is *leisure travel*.
2. Therefore, two kinds of travel may be identified. While *leisure travel* overlaps with *leisure*, *business travel* does not.
3. There are also two kinds of *leisure*. While *leisure travel* is a part of *travel*, *leisure at home* is not.
4. Single holiday or week-end trips are seen as *non-vacation leisure travel*. Since *Vacation* means an extensive off-work period, the briefer trips will normally not

[3] Discussions over a number of years with Thor Flognfeldt and other former colleagues at the Travel and Tourism Unit of Lillehammer College have been helpful in clarifying concepts and their relationships.

be counted as a vacation,. The *vacation* term implies some minimal duration, so that neither an afternoon cruise to a neighboring community nor a longish week-end in a city abroad are likely to qualify as *vacation* cases.

5. The entire *vacation* circle, however, is contained within the *leisure* circle, indicating that *vacation* always implies *leisure*.
6. Most of the *leisure travel* intersect is occupied by the larger part of the *vacation* circle, implying that *leisure* trips and *vacations* are close to being synonyms.
7. But there is also a part of *vacation* that falls outside the *travel* circle, indicating that some people prefer to spend their vacation at home.
8. The small part of *leisure travel* on the outside of *vacations* may remind us that *non-vacation leisure travel* also exists. Depending on how strictly *vacation* is defined in terms of duration, a number of short leisure trips will be counted as *non-vacation* travel.

Within this framework, a *tourist* may simply be defined as someone who travels; thereby engaged in the process of tourism. To match the large (and increasing) number of travelers, a set of related social institutions have evolved. This set has aptly been dubbed 'Tourism'. To quote a recent Tourism text book (Pearce, Morrison, & Rutledge, 1998);

"...Tourism is the sum of government and private sector activities which shape and serve the needs and manage the consequences of holiday and business travel. The central 'activities' of the government and private sector include promotion, planning, providing services and preventing impacts."

Evidently, there are differences in scope between Travel/Tourism on one hand and Leisure on the other. Consequently, two partly different academic fields of work have emerged over the years. The two fields frequently relate to different *institutions*, as well as to different *academic programs* and *academic journals*. Also, partly different *research traditions* have been developed in the study of motives.

There may be perfectly acceptable reasons for this specialization. Academic institutions and journals have different mandates and purposes, and their very existence may be dependent on maintaining their focus. In the Tourism & Hospitality section of Business schools, economists and others will teach e.g. economics, marketing and business leadership for the Tourism industry, and choose curriculum and journals accordingly. Teaching a Tourism course in a Social science department, however, is likely to imply a less applied, more 'academic' focus. And in Sports or Physical Education departments offering a degree in Leisure, practical skills and proper administration/use of nature reserves may be emphasized, perhaps supplemented by a relevant course in Environmental Biology.

In environments such as these, keeping up with recent developments is a demanding task. A lot of different information is competing for attention, and large parts of it have to be ignored. Naturally, then, some academics as well as a number of journal editors will choose to stay within their designated territory. Consequently, not all authors point to the neighboring field as a source of relevant or interesting insights.

Hopefully, tourism-based programs and journals will be open to the fact that leisure research may be relevant to understanding tourism as well as leisure. Also, leisure professionals may gain useful knowledge and insights from the tourism industry and the social science research that relates to it. Potential contributions from the 'other side' should be evaluated through empirical research with an open mind, and not be excluded on *a priori* basis.

The distinction between travel and leisure research is especially unfortunate when the focus is on *leisure travel motives*. Motive research on leisure tourism is clearly more common than motive research on business travel (Pearce et al., 1998; p. 32), meaning that travel motive research is largely concerned with vacations and leisure travel. And, more importantly, when people travel for leisure, their motives will reflect the hopes, wishes and goals related to the anticipated leisure activities during the trip. Hence, tourism motive research should have relevant insights to offer leisure scholars — and vice versa.

To the present project, also a brief comment on a specific Norwegian concept is necessary. In Norwegian, the term "Ferie og fritid" [*vacation and leisure*] is frequently used, taking for granted that two terms by and large cover common ground. In this specific context, then, *vacation* becomes a synonym of *leisure travel*. This is consistent with Figure 1, where *vacation* is part of the *leisure* concept. As we shall see in the following, the twin concept of "Ferie og fritid" will be employed in the question formats of the present project.

Consequently, both *tourism* and *leisure* literature will be assumed relevant to the present project, and no *a priori* preference will be given to one or the other.

1.3.2 Tourism and Leisure research on motivation

In a recent tourism textbook, Pearce (1995; p. 178) makes the prediction that:

> *"As tourism grows into an increasingly sophisticated consumer industry, …the motivation of tourists will become a core part of all tourism studies"*.

And, introducing the topic of "Motivation for Leisure", Iso-Ahola also (1989; p. 247) underlines the importance of motives:

> *"...There is hardly anything more basic to leisure behaviors then the factors or mechanisms that prompt such behaviors. It is also important to know how much these mechanisms vary under different conditions and for different groups of individuals. Second, there are practical reasons for studying leisure motivation. If we know the basic principles of leisure motivation, we can apply them in practical settings and contexts of service delivery..."*

Clearly, motivation is seen as important to tourism as well as to leisure. We may turn, therefore, to discussing the treatment of that subject in these two fields of applied research.

1.3.2.1 Tourism motive studies

Wahab (1975) drew attention to the great variety in travel-related motives. He believed that a better grasp of this problem area was needed for an improved understanding of the markets involved, and that psychological research methods should be employed (Wahab, Crampon, & Rothfield, 1976). In the scientific *tourism* literature, studies of peoples' reasons for travel or leisure choices frequently appear as 'motive' surveys. Focusing on peoples' own, cognitively available reasons for engaging in a specific leisure activity, such studies have been rather prolific. Economists have been influential in this research, and *marketing* or *consumer research* perspectives are often applied.

Early research in this field produced different lists of salient travel motives. Crompton (1979) arrived at a list of nine motives, based on a survey of 39 informants in a convenience sample. But following a consensus procedure in a group of well-informed researchers, Crandall (1980) suggested seventeen 'motivational categories'. Several test items were expected to measure each of these categories. And, as a third example, Schmidhauser (1989) identified eighteen 'tourism motives' in a representative Swiss travel survey.

Kleiven (1998b) pointed out that some of the need or motive types found by Schmidhauser (1989) in a survey of Swiss tourists may also be recognized from both Crompton's (1979) and Crandall's (1980) lists. Schmidhauser (1989) e.g. reports three social motives: 'To meet family, friends'; 'To have time for each other (Family, partner, friend)'; and 'To be with pleasant people, to enjoy companionship'. Cromptons motives (1979) include 'Enhancement of kinship relations' and 'Facilitation of social interaction'; while Crandall (1980) mentions 'Social contact', 'Meeting other people', 'Heterosexual contact' and 'Family Contact'. Apparently, there is some overlap here. At the same time, however, certain differences or distinctions may also be worth noting. People familiar with test theory, of course, may view this as the 'common variance' and the 'unique variance' of the items involved.

Schmidhauser (op. cit.) also pointed out that tourist' needs and motives have changed considerably over the years, influenced by historical, geographical, political, economical as well as technical developments. He also believed that people have varied and complex motives, and that no single journey can satisfy all the wishes and wants of a person.

In the face of the emphasis on cognitive and conscious motive processing, a recent effort to identify unconscious travel motives also perhaps deserves mention. Tran and Ralston (2005) used an online version of the Thematic Apperception Test (Murray, 1943) to find signs of non-conscious needs. Adventure tourism was preferred by those exhibiting a high need for achievement, and cultural tourism was more to the liking of those with an identifiable need for affiliation. While providing an interesting example of research into non-conscious travel motives, it clearly is an exception from the predominant trend.

Travel motive surveys have developed into a fairly prolific field of research, involving a number of authors (Gitelson & Kerstetter, 1990; Figler, Weinstein, Sollers, & Devan, 1992; Cha, McCleary, & Uysal, 1995). More recent reviews may be found in, e.g., Jamal & Lee (2003), Harrill & Potts (2002), and Prebensen (2006).

1.3.2.2 Leisure motive studies

In an influential book, *'Benefits of leisure'* (Driver, Brown, & Peterson, 1991), a large group of authors summed up research on recreation outcomes that are valued by people engaged in the recreation activities. This research tradition shares a central assumption with the 'motive' tradition of tourism research, largely taking for granted that people are consciously aware of their gains from personal recreation choices and make rational decisions on that basis.

Other similarities also exist: Marketing or consumer research perspectives are common, and research is influenced by both academic and applied considerations. However, the 'leisure' tradition puts more weight on experiences and satisfactions of a mainly non-economic nature, and perhaps relates more to government institutions

(responsible for maintaining public recreation opportunities) than to tourism industry and organizations.

Among the early efforts to produce motive or benefit lists for leisure and travel behavior, Driver and his associates were quite influential (Driver, 1977; Driver, Nash, & Haas, 1987). Working with 43 *"Recreation Experience Preference Scales"*, they were able to sort them into 19 "domains", representing different types of needs in a recreation context. The domains were viewed as independent factors, and measurement reliabilities were acceptable.

Working within the same tradition, Tinsley (1979; 1984) is also frequently quoted. Through a factor analysis of responses to short descriptions of the importance of several valued outcomes of leisure activities ("*Paragraphs about Leisure"*), he arrived at eight 'need factors'. This does not seem to be in conflict with the results of the Driver group, however. In a review article, Driver, Tinsley and Manfredo (1991) point out that the results based on *"Recreation Experience Preference Scales"* and "*Paragraphs about Leisure"* showed interesting similarities. Several psychological motives or preferences may be identified, suggesting that some common ground has been covered.

Based on factor analysis of a large number of motive questions, the *Leisure Motivation Scales* (Beard & Ragheb, 1983) has gained some common acceptance. Here, a four-factor model is suggested, consisting of four independent factors: Intellectual, Social, Mastery/Competence and Stimulus Avoidance. Factor measurements showed satisfactory reliability. Ryan (1994a) points out that this result has been replicated by others (Lounsbury & Franz, 1990; Ryan, 1993), and that some factor stability has been shown over several years (Lounsbury & Hoopes, 1988). Ryan (1994b) also argues that the model is consistent with Mannell & Iso-Ahola's (1987) model, and that this adds to its attractiveness.

A detailed discussion of contributions to the motive/benefit research in tourism and leisure research may be found in Kleiven (1998b). Like Driver, Tinsley & al.

(1991) and Ryan (1997), this author believes that a number of common trends or salient motive dimensions may be identified, in spite of obvious differences between motive lists.

As indicated in part 1.2.3.2, also intrinsic motivation and "flow experiences" are obviously relevant to the understanding of leisure and vacation behavior. At the start of the present research, however, we were not familiar with operational procedures that could allow pre-experience assessments of potential "flow" or intrinsic motivation. The intriguing problem of relating intrinsic motives and flow experience to predictive motive → behavior models therefore had to be left to future research.

1.3.2.3 A priori *theories of motivation*

Several theories of leisure and tourism motivation appear to have originated in logical analyses or in distinctions imported from lay language, rather than being founded in empirical research from the start. However, certain *a priori* theories have been shown to be compatible with later empirical findings. Also close to common sense, some of these are both used in research and quoted in text books.

Gray (1970), e.g., makes a distinction between *Sunlust* and *Wanderlust*, and offers the dichotomy as an explanation of two different types of travel. *Sunlust* makes people travel to places that offer better opportunities for *specific* leisure behaviors like sunbathing, swimming and relaxing. *Wanderlust*, on the other hand, is what lies behind when people leave familiar surroundings to experience *generally* novel and exotic cultures and places.

The views of Mayo & Jarvis (1981) carry some resemblance to Gray's dichotomy, focusing on a need for *consistency* and a need for *complexity*. Consistency-motivated individuals reduce their inner tensions by seeking safe and predicable places and activities. People motivated by a need for complexity, on the other hand, will be drawn to novel and less predictable options. Some balance between the two motives will be sought by each individual.

As pointed out by Pearce (1989), *wanderlust* may be viewed as a “push” factor, generally prompting people to leave home. *Sunlust*, on the other hand may be understood as a “pull” factor, connecting the tourist to a destination by providing a specific reason to go there.

The *a priori* push – pull distinction has been adopted by several authors (Dann, 1981; Dann, 1977). It assumes that peoples' reasons for *going away* ('escaping') are different from their reasons for choosing a specific journey or destination ('seeking') (Crompton, 1979; Jamrozy & Uysal, 1994).

Iso-Ahola expanded the push-pull distinction into a model with two dimensions, one running from 'Escaping interpersonal environments' to 'Seeking interpersonal rewards', and one from 'Escaping personal environments' to 'Seeking personal rewards' (Mannell & Iso-Ahola, 1987; Iso-Ahola, 1989). Relating this to Optimal Arousal Theory (Hull, 1943), leisure behavior was viewed as balancing between too little and too much stimulation. Consequently, one may be motivated for *less* or *more* interpersonal contact, as well as for *less* or *more* personal contact.

Other well-known *a priori* motivation models include MacCannell’s (1976) *search for authenticity* as the modern tourist’s overriding motive and Pearce’s (1988) Maslow-inspired *travel career ladder*. Also the motivations *implied* in traveler or tourist typologies constitute challenges to our understanding of motives.

1.3.2.4 Comments on tourism and leisure motive studies

Several scientific disciplines have contributed toward an improved understanding of the phenomena involved in travel and tourism. But researchers in this field are often motivated not only by a general academic interest, but also influenced by the more specific interests of travel or leisure enterprises and their organizations.

Although studies with samples representative of larger 'normal' populations do exist, 'motive' studies commonly employ convenience samples of users of specific

travel 'products' or activities. It is not surprising, therefore, that motive lists show a great deal of variation.

Nevertheless, certain themes emerge in several places, suggesting at least some general validity. Also, the Beard & Ragheb (1983) leisure scales have been successfully replicated in different contexts, thus appearing to be a safe starting point for further research.

In most of these studies, a rather straightforward approach to peoples' reasons for leisure and leisure travel choices is common. A common premise appears to be that interesting information may be obtained by simply asking the people involved. This is, of course, consistent with the cognitive motivation approach outlined earlier.

Witt & Wright (1992) have even pointed out the possibility of employing Vroom's (1964) "expectancy-value" theory to the investigation of leisure and holiday preferences. They do not appear very confident about its potential, however, warning the reader that *"…The complexity of expectancy theory also makes it difficult to use the model to predict individual behavior…"* (Op. cit., p. 49).

A more detailed discussion of international leisure and tourism motive research is given by Kleiven (1998b). Working in Norway, however, it should also be kept in mind that national variations may exist. Vacation and leisure motives among Norwegians may or may not be the same as in other populations or cultures.

1.3.3 Norwegian motive research

In Norway, Haukeland's (1993; 1996; 1992) lists of 'Vacation types' may be viewed as part of the tourism motive survey tradition. At the time when the present research was undertaken, Haukeland's (op. cit.) reports could safely be assumed to represent the national state of the art. In a factor analysis of 'importance' ratings in a nationally representative survey (Haukeland, Nymoen, & Rideng, 1991), five orthogonal factors were identified. The factors were viewed as motive dimensions, and were named *The*

Traditional Norwegian Holiday Dream, *Speed and Excitement*, *Culture and Education*, *Pleasure and Relaxation*, and *Family Togetherness*.

After SEM analyses of data from this survey, however, Kleiven (1998a) suggested that increasing the number of factors in the (implicit) measurement model would improve the fit. *Fitness, Peace & Quiet* and *Nature* may be separated out from the rather general *Traditional Norwegian Holiday Dream*, and minor changes to the *Family Togetherness* factor could also yield fit improvements.

The Outdoor Recreation Survey (Vaagbø, 1993) also suggests potential motive dimensions. Both in Vaagbø's (op.cit.) original report and in secondary analyses (Kleiven, 1994) *Experience Nature*, *Peace & Quiet*, *Accomplishment* and *Fitness/Exercise* were among the factors identified (Aasetre, Kleiven, & Kaltenborn, 1994).

In a general consumer survey (Asbjørnsen, Fjelde, Hult, Kværk, & Pedersen, 1994), a large and nationally representative sample was asked about the purpose of their summer vacation trip. From these data, Thrane (1996) derived several different reasons behind vacations, most of which were similar to known motive dimensions. The three main types were *Experience place/country*, *Visit family/friends*, and *Sunbathing/swimming*.

In conclusion, most of the dimensions emerging from the Norwegian research clearly could be viewed as replicates, having parallels or counterparts in previous research elsewhere. Such dimensions, of course, were likely candidates for inclusion in further national research. Other scales, however, were not that well represented in the international literature, but nonetheless appeared to represent wishes, wants or motives that appeared to be central to the Norwegian general public. Scales of this kind should therefore also be considered for inclusion in our research efforts.

The focus remains, however, on motives that are common, valid and relevant for larger groups in the population. The needs and wishes of smaller, special groups are likely to be different from those of the population at large. It is important,

therefore to avoid mixing 'deviant' minority motive traits with the common motive patterns.

1.4 Research challenges and questions

On the background presented in the previous paragraphs, a series of research objectives and questions were worked out. Some of these were reasonably well known at the onset of the project, while others emerged in the course of work. Many important insights and informations were not available from the start, and had to be worked out along the way.

In this *post-hoc* presentation of the project, however, readability is a main concern. Hence, this account will be structured according to the comprehension available towards the end of the project, and not as a chronologically faithful account of the research as it actually unfolded.

In retrospect, then, a large set of challenges and questions required attention at the start of the project. The overriding intention was *to construct a Norwegian set of 'motive' scales for leisure and vacation choices*. This task may be viewed as consisting of three interdependent yet separate research tasks*:*

1. *Selecting relevant motive dimensions,*
2. *developing measurement scales for these dimensions, and*
3. *assessing scale properties.*

Each of the three formulations, of course, covers a number of interesting research problems. Which criteria, e.g., may support the selection of motive dimensions for the Norwegian scene? And what does scale development imply – which challenges have to be met and what are acceptable psychometric standards? In the next paragraph (1.4.1), our main arguments for including and excluding certain motive dimensions may be found. In paragraph 1.4.2, a brief sketch of the reasoning behind our

measurement developments is given. The final paragraph (1.4.3) of the sub-chapter contains a brief discussion of how the properties and usefulness of the motive dimensions may be explored.

In addition to these three research tasks, I had a personal interest in Structural Equation Modeling at the time when the project was started. Having received my scant psychometric training about forty years ago, I saw the motive project as an opportunity to get acquainted with some intriguing contemporary methods of analysis. While this curiosity certainly did influence parts of the research process, it was not expressed as a formal project purpose or research question. Accordingly, our experience with the 'new' methods will not be discussed as a separate point.

Informally, however, my initial hope that it would be worth while to invest time in SEM has clearly been reinforced. Several results and insights from the project are in fact dependent on 'new' analyses, and certain questions would have been difficult to handle within the constraints of 'old-fashioned' psychometrics. Conventional test statistics obviously include valuable analytical tools that have proven indispensable also in our context. Through CFA, SEM- and MIMIC[4] models, however, the project has reached one step further, showing by example that modern approaches to data analysis have more to offer.

1.4.1 Selecting a Norwegian set of 'motive' dimensions

1.4.1.1 Inclusions

From the existing literature, the first candidates for inclusion in the project were the four Beard and Ragheb (1983) dimensions. The *Intellectual*, *Social*, *Mastery/Competence* and *Stimulus Avoidance* dimensions clearly covered areas that were important and relevant both in Norway and elsewhere. Similar concepts were recognized also

[4] MIMIC is short for Multiple Input Multiple Causation. A MIMIC model, then, may be defined as a confirmatory factor analysis model with covariates, predicting some target behavior.

with other researchers, even if carrying different labels. This also implies *comparability* to other work, avoiding the 'one-off' problem prevalent in much travel and tourism research.

Having selected the Beard and Ragheb (1983) dimensions for a start, their actual scales naturally were a convenient point of departure. However, we wanted to arrive at a conceptual replication, not a simple translation, and felt free to use items that were different yet similar to the original items. In our project, the original scales (*Intellectual*, *Social*, *Mastery/Competence* and *Stimulus Avoidance*) were renamed *Culture*, *Friends*, *Accomplishment* and *Peace/Quiet*; the intention nonetheless being that they should be very close to measuring the four original dimensions.

It was felt, however, that these four dimensions did not cover everything that was important on Norwegian scene. According to primary (Haukeland, 1993) and secondary (Kleiven, 1998a) analyses of survey data, additional motive dimensions were needed. *Sun and warmth*, *Family*, *Nature*, *Fitness* and *Indulgence* had been shown to be central concerns to the peoples' leisure and vacation choice in this country. These concerns were not adequately covered by the four Beard & Ragheb (1983) dimensions. Consequently, these five dimensions were added, mainly using relevant items from Norwegian surveys.

1.4.1.2 Not included

Unavoidably, selecting dimensions for inclusion in the project also implies exclusions. While reasons for including most motives were reasonably clear and defensible, arguments for excluding dimensions were perhaps less strong.

In selecting these nine initial dimensions, care was taken to avoid motive types or concerns that would only apply to limited parts of the population. While special groups certainly may have leisure wishes and goals that are of obvious importance to group members, minority concerns may be unimportant or even misleading concepts for describing the population as a whole. High-risk sports may serve as an example: Arousing adrenalin kicks may be a legitimate and important motive for some young

peoples' choice of leisure activity. In a nationally representative survey, however, experiencing extreme activities is likely to only appear as a rare and exceptional wish in the population at large. It thus should not be included in a national survey of general trends.

In the initial phases of this research, therefore, some informed guesses were made as to which motive dimensions would prove generally relevant. In the longer run, of course, the existence of such dimensions must be *empirically determined*, and not selected through *a priori* assumptions.

At the beginning of the project, also an explicit testing of Vroom's (1964) "expectancy-value" theory was briefly considered. This would have implied developing a double set of scales, however; since both importance and valence of each dimension would have to be measured. But expecting to have very limited resources for this research, one set of scales appeared to be sufficient. Consequently, the thought of developing a double set of scales for a number of properties was dropped. Also heeding Witt & Wright's (1992) warning about the complexity of this theory, its use was left to future research.

A decision was also made not to cover intrinsic motives. The main reason for this exclusion was a feeling that this exciting field could prove too large and too much to handle. There was also some uncertainty as to the *generality* of intrinsic motives: Would they apply mainly to high-profile leisure activities demanding some level of skill, or would the concept also be applicable to simple run-of-the-mill leisure routines? With our limited knowledge of the field, there were also worries that assessing 'flow' and intrinsic motives would require more demanding data collection methods than simple scaling.

The challenge of including dimensions implied in the *a priori* theories of part 1.3.2.3 was also left aside. Testing the divergent validity of the two dimensions in Iso-Ahola's (1989) model, e.g., could be viewed as an interesting challenge. It would require, however, the development of an 'interpersonal' scale as well as a 'personal' one. Since neither test items nor suitable scales were proposed by Iso-Ahola, this

could imply a time-consuming process. Also, if Iso-Ahola's model is basically correct, it may prove possible to use *other* scales that are relevant to his personal and interpersonal dimensions to check the properties of the model.

For *a priori* motive theories more generally, an important comment was made by Pearce & al. (1998, p. 40) in their discussion of good theories of tourist motivation:

> *"…Some theories in social science, while they make sense and can be communicated readily, fail to influence other researchers because they offer no guidelines or suggestions as to how they can be measured or tested with data."*

Even to people who appreciate different methodological traditions within the social sciences, this appears as a real practical problem. Having no precedents for the operational definition of, e.g., *authenticity* or *travel career ladder*, the development of suitable measures may prove demanding, in terms of both money and time.

In short, therefore, our wish for methodological simplicity was rather decisive. Only dimensions appearing to be generally relevant to large population groups were used in the study. Secondly, the *expectancy-value* approach was dropped. *Intrinsic motives* and *a priori* theories were also left out of the project. This does not imply, however, any judgment of irrelevance or inadequacy of these approaches. But in practical terms, it was felt even if such additional complications were excluded, the remaining methodological challenges would be sufficient.

1.4.2 Constructing measurement scales

The choice of nine initial motive dimensions, then, was based mainly on the work of Beard and Ragheb (1983), Haukeland (1993), and Kleiven (1998a). Following this 'abstract' decision, however, 'concrete' measurement scales had to be developed, to cover the dimensions intended in Norwegian. This implies theoretical problems as well as practical tasks, most of which are related to meeting reasonable psychometric standards.

To retain comparability with previous research, certain methods and techniques were seen as rather obvious choices. Likert-type scales, e.g., were taken for granted, summing scores over several single items and thereby preserving a basic approach that is common in this type of research.

Having selected motive dimensions that were already known from the relevant research literature, a number of individual items included in the summed scales used for measuring the dimensions was also available. Good examples and ideas for individual test items, of course, constitute a far better starting point than beginning the entire process from scratch. Nonetheless, it is no trivial task to adapt items to a different context, to translate a number of items into Norwegian, or to select and add new ones as needed. A more detailed account of the initial phases of this work is given by Kleiven (1998b).

1.4.2.1 Scale validity

Scale validity, of course, is an overriding question: Can scales be constructed that measure the dimensions intended? Will the resulting scales measure and identify our central dimensions in Norwegians' leisure and vacation motives? Scales should retain their theoretical anchoring in international leisure and tourism motivation literature, as well as in specifically Norwegian findings in this area.

There are several approaches to validity, however (Pedhazur & Schmelkin, 1991; Murphy & Davidshofer, 1994).

1. *Content* validity is basic to scale construction: Does the measurement procedure elicit information that is relevant to the content or meaning of the concept behind the scale? In its simplest form, content validity is secured through checking that the content of each test item is meaningfully related to the common concept.
2. *Construct* validity refers to the latent variable implied – the personal trait or attribute assumed to be measured by our instrument.
3. *Divergent* validity will also be an issue with our project, since the nine scales are expected to be conceptually distinct. Ideally, between-scale correlations should be

fairly low, to keep the distinctions easily visible. Scale interrelatedness, therefore, is a central challenge; may largely independent measures be constructed, or will the dimensions prove to be strongly interrelated? If very high correlations threaten the divergent validity, scales may have to be collapsed into a smaller number of dimensions.

4. *Criterion* validity is also relevant, comparing scale results to independent measurements (criteria) of the same dimension. In our case, however, not only the measurement of the latent motive variables may be important; predicting leisure and vacation *behavior* could be viewed as our ultimate goal. The relevant behavior may then be used as the validity criterion, and the question is whether or not the motive scales will adequately predict such behavior.
5. *Concurrent* validity, then, may be demonstrated by showing that scale results are significantly correlated with some relevant behavior. If, e.g., peoples' scores on a *Fitness* motive scale coincide with reports of brisk walks and strenuous outdoor exercise, this supports the belief that the Fitness scale yields information about willingness to improve one's physical shape. Concurrent validity, therefore, may serve as a proxy for *predictive* validity.
6. True *predictive validity*[5], however, has to be assessed through some pre-and-post design, measuring motives first and then assessing behavior at a later time.

1.4.2.2 Scale reliability

Another basic requirement is scale reliability. The measurements should prove stable and internally consistent, yielding comparable results across minor variations in sample, situation and context.

[5] In the context of multiple regressions, "prediction" is commonly used in a slightly different manner. Here, *predictor* variables denote the independent variables in the regression equation, whether or not these variables are measured at the same time as the dependent or before. In a regression context, therefore, a statistical *prediction* may relate to concurrent as well as to predictive validity. Unfortunately, the term "prediction" may be used at times without properly heeding this distinction.

The internal *consistency* of a scale may be checked with, e.g. Cronbach's alpha or CFA (Confirmatory Factor Analysis), basically testing inter-item relations in different ways.

For assessing measurement *stability*, a test-retest procedure may be needed to see if measurements change over time.

1.4.2.3 Generally relevant dimensions

An issue closely related to validity is the *generalizability* of the scales. As was indicated earlier; the intention from the start was to include only motive dimensions that were relevant to larger parts of the population. Good intentions, however, is not enough. The task of actually testing the scales' applicability remains: Will the scales be useful or applicable to broad population groups, or will they only prove relevant to limited minorities?

1.4.2.4 Representative surveys

To properly assess the question of generalizability, representative surveys are needed. As indicated in paragraph 1.3.2.4, however, convenience samples have been common in leisure and tourism motive research. This practice may have contributed to some apparent disagreement about motive lists. To avoid misleading generalizations following overrepresentation of population minorities, therefore, representative surveys are preferred for obtaining data on *general* leisure and travel motives.

Even representative samples, however, may be exposed to random errors. Therefore, samples should be large enough to achieve some stability in the properties measured. Also, one single sample is not likely to suffice. Conclusions should ideally be based on a series of replications in representative surveys, to minimize the risk of misleading random variations in the samples.

Once scales are well defined, proper scale norms should be obtained from a representative *national* sample.

1.4.2.5 Structured measurement techniques

Given non-trivial sample sizes, fairly structured survey methods will be needed to reach the respondents in an economically viable manner. The development of efficient and suitable data gathering techniques, therefore, could be viewed as a series of additional challenges.

Most importantly, the practical operationalization of the scale measurements needs to be worked out: Exactly how should the necessary information be collected? Understanding the abstract idea inherent in a dimension implies no guarantee that a workable way of measuring it will be found. Hence, a practical measurement or scaling procedure must be demonstrated for each single dimension.

Firstly, a suitable interview or data collection situation has to be defined, that allows the transfer of information in an efficient yet socially acceptable manner. Secondly, question and answer formats have to be selected. The question format as well as the response format should be easily comprehensible to respondents, and contribute to a robust and reproducible data collection procedure.

1.4.3 Exploring the motive dimensions

Given that valid *methods of measurement* are developed, a first impression of the Norwegians' leisure and vacation motives may also be obtained. Such *substantial* information may prove interesting not only to the academic community. The tourism industry should welcome an improved understanding of reasons behind travel choices, and several public agencies could profit from better models of leisure and recreation behavior. Although not the main goal of the present series of studies, facts and figures about the motive dimensions may thus prove interesting in several practical contexts.

1.4.3.1 Basic properties of the motive dimensions

Some readers, therefore, may tempted to shift their focus from scale construction to the preliminary results, and an array of central questions spring to mind. What are the most important leisure motive dimensions in Norway? Do the scales cover the

relevant range of the dimensions adequately, avoiding ceiling and floor effects? Are there social or demographic differences in leisure motivation, or will all dimensions be equally relevant to all kinds of people?

Some of these questions may find a preliminary answer through data from our efforts of scale construction, and will be reported in the present project. However, more thorough investigations into the substance of motive dimensions will have to be left to later reports — and to future research.

1.4.3.2 Usefulness of the dimensions

One essential characteristic of the scales, however, is their practical utility. More precisely, their power to predict leisure and vacation behavior will be a central point, which will receive some attention in the present report.

The reason for this, of course, is that this substantial question is very closely related to the complex question of scale validity (cf. paragraph 1.4.2.1). With a focus on *content* or *construct* validity, highly valid motive scales will measure motives well; while the measurements from less valid scales will be less precisely aligned along the intended motive dimension. For a given correlation between motive dimension and target behavior, therefore, the highly valid scales will have better predictive power than scales with limited validity. And, conversely, high predictive power requires high scale validity.

For studying the impact of motive dimensions on leisure and vacation behavior, therefore, motive measurements with high content and construct validity would definitely be an advantage.

With a focus on *criterion* validity, however, an apparently simpler question may be put: Do the 'motive' scales predict the target (leisure and vacation) behavior or not? Strong predictions then mean high validity, and vice versa. Of course, a theory that such correlations are mediated or modified through latent 'motive' variables may still be interesting.

In a multidimensional world, however, motives may not be expected to be the only influence on behavior. Quite frequently, variables in a study show some degree of intercorrelation. Then the effect of one predictor variable in a multiple regression — or the effect of a factor in a multivariate analysis of variance — may be strongly influenced by the inclusion of additional factors. Interaction effects are not uncommon, and basic demographic variables are often observed to cancel out the effect of study variables that are more theoretically interesting.

In surveys, e.g. in the context of practical 'consumer' research, motive measures will compete for place and attention with relatively simple demographic variables. In such cases, including motive variables will only be worth while if they can improve behavior predictions made from existing and available demographics.

A central question in assessing the utility of a motive scale, therefore, is not only whether or not it *in isolation* will predict interesting behavior. Also its predictive power *in the presence of other predictors* is interesting — be it other motive scales, simple demographics or other information available.

In other words: The predictive validity of scales should not only be assessed through the simple bivariate validity coefficients of "classical" psychometrics, but also in complex models including several potentially interesting predictors.

2. THE MAIN RESEARCH QUESTIONS AND GOALS

The intention of this project, therefore, is threefold:

1. Identify central dimensions in Norwegians' leisure and vacation motives, based on international and Norwegian research on such motives.
2. Construct measurement scales for the motive dimensions selected. Scales should be based on representative surveys, and have acceptable psychometric properties.
3. Explore the scales' properties, to obtain a first impression of Norwegians' leisure and vacation motives.

3. PRESENT SERIES OF STUDIES

3.1 Study I, the initial survey (Kleiven, 2005)

3.1.1 Main purpose

The general intention of this study was to investigate known central dimensions in Norwegians' leisure and vacation motives, with a view to establishing sound measurement scales for the dimensions.

3.1.2 Short summary of Study I

Seeing the four influential Beard and Ragheb (1983) scales as a promising point of departure, we specifically wished to have a conceptual replication of these. The original scales were: *Intellectual*, *Social*, *Mastery/Competence* and *Stimulus Avoidance.* In our study, they were named *Culture*, *Friends*, *Accomplishment* and *Peace/Quiet*. Additional dimensions appeared relevant to the Norwegian scene, however, according to primary (Haukeland, 1993) and secondary (Kleiven, 1998a) analyses of survey data. Hence, the scales of *Sun/warmth*, *Family*, *Nature*, *Fitness* and *Indulgence* were added.

A survey of 'Vacation habits' in the Norwegian inland city of Gjøvik (N=401) was carried out, as part of a compulsory course in *Social Science Methods* for *Travel & Tourism* students at Lillehammer College. Twenty-five students collected data through personal interviews in respondents' homes, utilizing a 2% stratified sample of persons drawn from the offical census (Kleiven & Thrane, 1994).

In the context of this survey, four-item rating scales for each of the nine dimensions were tried out. The question format was based on the understanding that "vacation and leisure" [ferie og fritid] is a joint (and common) concept in Norway (Cf. paragraph 1.3.1). The words employed were: *"During your vacation and leisure*

time this summer, ***how important*** *were these following issues to you?"* [I fritiden og ferien i sommer, **hvor viktig** var disse forholdene for deg?]. For each item, responses were rated on a four-point scale: 1 (*Not important*), 2 (*A little important*), 3 (*Important*), and 4 (*Very important*).

The psychometric properties of most scales proved to be generally acceptable, with *alpha* values comparable to those found in previous work in this field. Seven out of the nine scales had an *alpha* above 0.60, and five were at 0.70 or above. The results of CFA measurement models were also viewed as encouraging, with only one scale (*Family*) yielding a clearly inadequate model fit.

Mean scores for all scales ranged from 2.00 (*Accomplishment*) to 3.00 (*Peace/quiet*). This suggests that all dimensions are relevant to a large number of respondents, and that ceiling or floor effects are not likely to be a problem.

In a SEM perspective, the replication of the four Beard & Ragheb scales is only moderately successful. While a combined model with four independent factors is clearly untenable, a model with correlated factors fares slightly better. Acceptable fit, however, could only be produced by modifying the model. While a combined nine-factor model does not appear tenable, an eight-factor model with correlated factors is at least closer to the data. Also here, however, adequate fit is only produced by accepting minor modifications of the model.

It should be noted, however, that such combined factor models are rather demanding. While the four-factor model implies 98 degrees of freedom, the eight-factor one has 436; both making it very unlikely to obtain a non-significant value of chi-square. In this context, it may be observed that the modifications needed to arrive at acceptable model fits do not appear to invalidate the meaning of the scales or the basic factor structure of the models. This appears to hold for the four-factor model as well as for the eight-factor solution. While this should not be construed as clearly supporting the models, it does suggest that the models are not terribly far off target.

Although not a main target of this first study, the validity of the scales will of course be an important point in the longer run. Only scales that measure something worth measuring should be retained for further research. Therefore, preliminary checks on validity were undertaken. Simple correlations indicate strong relations between the scales and certain leisure behaviors – both positive and negative. And in multiple regressions, combining the motive scales with demographic information, rather strong predictions of specific leisure behaviors appear.

3.1.3 Conclusions of Study I

The four 'conceptual replications' of the original Beard and Ragheb (1983) were supported by reliability analyses and CFA of individual scales. So were four additional scales, making up a total of eight scales.

A model that combines nine factors was not supported. But confirmatory factor analysis of four- and eight-scale combined models (with correlated factors) suggest that while there are significant differences between models and data, the differences do not appear to invalidate the basic properties of the models.

Preliminary checks suggest that the scales do have at least some ability to predict leisure behaviors. More work is needed on the issue of validity, however.

3.1.4 Methodological comments after Study I

In addition to the main conclusions, a number of more practical issues were noted for consideration in further research.

3.1.4.1 The need for representative samples is confirmed

Strong gender effects may serve as a reminder that substantial demographic differences should be expected in this type of research. Representative samples, therefore, is needed to prevent misleading results and conclusions.

3.1.4.2 Item replacements

Three out of 36 items proved detrimental to the *alpha* values of their respective scales. Replacing these items, therefore, may be considered in the event of further research.

3.1.4.3 Replication in coastal town

Two out of three weak items (*Feeling the smell of the salty sea*) and (*Swim in clean water*) appear related to a maritime context, and thus may not have been entirely suitable for inland use. Replication in a coastal town, therefore, may be an alternative to replacing these items.

3.1.4.4 Vacation/leisure combined, or vacation only?

Commonly, the exact format of the motive questions does influence the response patterns. As previously noted, it is argued that vacation and leisure *(ferie og fritid)* is a joint concept in Norway, and the present study therefore does not distinguish between the two parts when asking about motives. It would be prudent, however, to check this assumption. Will responses be different if questions specifically focus on only one side of the concept: Vacation *or* leisure?

3.2 Study II, the first replication (Kleiven, 2006)

3.2.1 Main purpose

A common worry in social science research is sample dependency. The sample employed in an investigation may have some special or uncommon characteristics, leading to misleading general conclusions. The principal aim for this study, therefore, was to check if the results for all nine scales will be replicated in the new sample.

In addition, a small number of methodological questions (listed in paragraph 3.1.4) needed to be addressed.

3.2.2 Short summary of Study II:

A replication of the original study (Study I) was carried out in the context of a more comprehensive travel and leisure survey of the Norwegian township of Sandefjord. Twenty-four *Travel & Tourism* students from Lillehammer College interviewed all respondents in their private homes.

In the town of Sandefjord, 29.169 persons were above 17 years of age. An intended 1.3% sample was drawn from official census data, and was stratified on gender, age group and electoral district. Getting the planned interviews proved more difficult in this town, however, resulting in a higher refusal rate and a 0.9% sample (N = 261) (Kleiven & Thrane, 1996).

The motive items were administered only to respondents who actually had been away to a summer vacation (N=154), using the format "*During your vacation trip this summer, how important were these issues to you?*" [På feriereisen i sommer, hvor viktig var disse forholdene for deg?]. All 36 items from study I were included. Ten new motive items were added, to form a complete list of 46 items. The ten 'extra'

items were viewed as possible replacements for 'old' items with known problems, and as a chance of increasing the number of items in each scale.

On the basis of reliability analysis with *Cronbach's alpha*, some adjustments were made to the scales. The INDULGENCE scale was dropped from further analyses, since it yielded a low *alpha* and also had not performed well in the initial study.

The problems with the two 'maritime' test items seen in the first study were also apparent in the new coastal town sample. The inland/coast difference, therefore, is not likely to explain these item problems.

Reliability analyses also guided three item replacements. The ACCOMPLISH-MENT item *Exposing your skills* was replaced by *Relate to people with similar interests.* In the NATURE scale, *Feeling the smell of the salty sea* was replaced by *See and experience Norway*. And, finally, the CULTURE item *Using your language skills* was replaced by *Satisfying an interest in history*.

Apparently, the three replacements do not change the scales in any adverse manner. *Alphas* for the eight remaining scales range from .60 to .76, and all scale means lie between values 2 and 3, i.e. rather close to the findings of the initial study. Also the relative sizes of the eight scale means are comparable in the two studies.

There were some *scale mean* differences between the two studies, however. In the replication, the scales with item replacements (ACCOMPLISHMENT, CULTURE and NATURE) had significantly higher mean scores than in the the initial study. Scales FAMILY and PEACE/QUIET, however, showed the opposite; i.e. significantly lower means in the replication.

But the correct interpretation of these differences is not self-evident. Firstly, the three item replacements make direct comparisons of this kind more difficult. A close inspection of the data reveals that for two of the scales, the differences may be due to the replacements made. Substituting *Exposing your skills* (item mean 1.6) in

the ACCOMPLISHMENT scale by *Relate to people with similar interests* (item mean 2.7) also affected the scale mean. The 'old' set of scale items would have yielded a scale mean of 2.1, but the 'new' set gave a mean of 2.3. Only the latter score is statistically significant from the score of the previous study (2.0). On the NATURE scale, replacing *Feeling the smell of the salty sea* by *See and experience Norway* has the same effect. While the 'old' item has a mean score of 2.4, the 'new' one has 2.6. This contributed to scale means of 2.7 and 2.8, respectively, and only the latter mean is significantly different from the initial mean (2.6). The third replacement (in the CULTURE scale) does not produce this effect.

Secondly, the joint *leisure/vacation* concept was employed in the motive questions of the initial inland study, while the obviously singular *vacation* was used in the coastal replication. In principle, therefore, the motive question format variable and the inland/coastal variable are confounded in the two surveys. But it should be kept in mind that the observed differences are rather limited in an absolute sense, however statistically significant. Leaving the ACCOMPLISHMENT and NATURE scales aside, the absolute size of the three remaining significant differences range from 0.2 to 0.1, on the scale running from 1.0 to 4.0. In other words, the largest observed difference equals about 1/5 of the distance between the scores of 2 (*A little important*) and 3 (*Important*).

In view of the exploratory nature of the two studies, I am reluctant to attach much importance to differences of this magnitude. The observed differences between the scale means of the two studies are not large, and may well be due to methodological imperfections. And, at any rate, the confounded factors of question format and geographical samples did not produce an obviously strong or convincing effect.

The results of confirmatory factor analyses of the eight revised scales may be viewed as generally encouraging, with five scales showing acceptable fit. However, in spite of an *alpha* of .74, the CFA measurement model for the FAMILY scale does not fit the data very well. Also the FITNESS scale has problems, but apparently less serious. More importantly, however, the item replacement in the CULTURE scale

may not have been a wise one. While this replacement served to increase the scale *alpha* from .75 to .80; it also changed the fit of the measurement model from excellent to miserable.

A combined eight-factor measurement model does not fit the data very well, however. And, just like in the initial study, an inspection of the modifications required for a better fit suggests that these modifications seem not to invalidate the basic model. Quite likely, the large and complex measurement model is also too ambitious for our limited sample.

Also consistent with the previous study, the scales appear to have acceptable concurrent validity for several types of vacation behavior. A few examples of MIMIC models that include demographic variables demonstrate rather effective predictions. It may be argued, therefore, that the scales may prove useful to a variety of segmentation and marketing purposes.

3.2.3 Main conclusions of study II

In conclusion, the replication of the *scale properties* of the initial study may be viewed as largely successful. The low alpha of the INDULGENCE scale was repeated, and the scale could thus be safely removed from further analysis. Also for the remaining eight scales, results look rather similar to those of the initial study. Neither *alpha* values nor scale means suggest that the results of the initial study should not be trusted; errors or deviant characteristics in the initial sample are not likely problems.

Also the CFA results were similar to those of the initial study. For the majority of the individual scales, measurement models were consistent with the data. But three scales show room for improvements. They include the FAMILY scale, the one scale which also yielded weak results in the initial study. By comparing models, the 'Congeneric' models by and large are seen as closer to data than the ''Tau-equivalent' and Parallel measures' versions (Pedhazur & Schmelkin, 1991).

And, also similar to the initial study, the combined eight-scale CFA model was not well supported by the data. Even with modifications, the model did not grasp all tendencies and relations in the data in an adequate manner.

This does not prove, however, that the joint CFA model is completely off target and useless. When allowing modifications that improve the fit of the model, the additions do not seem to contradict the basic layout of the model. Eight separate factors remain, even if some items load on two factors, a few error terms are correlated, and about half of the implied between-factor correlations are allowed. More importantly, however, the size of the present sample probably is inadequate for testing such a large and complex model.

In spite of the limited sample, examples of MIMIC models do look promising. In models also including central demographic variables, motive scales do improve the prediction of some central vacation behaviors.

3.2.4 Methodological comments after Study II

3.2.4.1 Small samples may yield unstable results

It should be borne in mind that the sample of the present study is very limited. In the context of complex CFA and MIMIC models, this represents a problem. With small samples, relatively small tendencies in the material may be given inappropriate weight. In the absence of consistent trends that are supported by a large number of observations, small errors and spurious coincidences may then influence results disproportionately.

At this point, therefore, testing the scales in a much larger sample appeared to be an obvious next step. If a nationally representative sample could be obtained, proper scale norms could be established.

3.2.4.2 Increasing scale steps from 4 to 5

With only four steps (1 – 4) in the scales, the variance of items and scales are limited. Through increasing the number of response alternatives from four to five, therefore, the chance of obtaining satisfactory reliability and validity measures may be improved.

3.2.4.3 Improving scales by replacing more items

Even after the replacements made in study II, all was not well with the scales. The internal consistency/reliability of the FRIENDS and the PEACE/QUIET scales were still only moderate ($\alpha < .70$), and the advantages of CFA for scale construction should have been more fully exploited. Clearly, suitable challenges remain for further research.

3.3 Study III, the stability check (Prebensen & Kleiven, 2006b)

3.3.1 Main purpose

In spite of known imperfections, reasonable confidence had been gained at the completion of the second study. Eight scales did appear to tap central leisure motive dimensions, with procedures approaching psychometric respectability. Also, the measurement models as well as preliminary MIMIC models suggested that the dimensions could well be viewed as *latent SEM variables*.

At this point, certain assumptions should probably be made explicit. Firstly, the 'reflexive' measurement model (Edwards & Bagozzi, 2000; Kline, 2006) implies the existence of a latent variable (motive) that influences all its indicators (item scores). In contrast to 'formative' measurement models, the latent variable is assumed to exist independently of specific measurement items. In other words, the existence of the motive dimensions is *assumed*, and not defined by its four items.

A closely related assumption is the belief that the eight motive types have some *permanence* or *stability*, not undergoing incomprehensible transformations over time. As Nunnally & Bernstein (1994, p. 214) put it: *"…Science is concerned with repeatable phenomena, which implies the repeatability of its measurements…"*

Of course, this is both a psychometric and a practical issue. Stable phenomena with relatively permanent properties is a necessary precondition for obtaining measurements with acceptable reliability. Hence, attempts at measuring changing and unstable things are likely to yield measurement problems.

In more practical terms, measuring leisure motives may be a futile exercise if they change fast, much and often. Without exhibiting some stability, motives may hardly be expected to contribute to the power of leisure behavior prediction models (Crawford, Godbey, & Crouter, 1986; Lounsbury & Hoopes, 1988).

In psychological research, insight is often gained by checking some of the assumptions made. The intention of the third study, therefore, was to see if the assumed phenomena measured by the motive scales are stable over a period of time.

3.3.2 Short summary of Study III

Through the cooperation of a travel company, access was gained to a sample of outbound tourists from Norway (n=243). A quasi-experimental pre-post design was employed, viewing respondents' trip abroad as the 'experimental treatment'. Accordingly, motive measures taken before and after the trip were used as the repeated measures or within-subjects factor. A two-level between-subjects factor was also included in the study. For the first group, post-trip questionnaires were collected shortly after their return; and about two months later for the second.

Eight motive scales were used in this study, most of which were adapted from the scales used in study I and II. After consultations with the travel company, however, the *Nature* scale was replaced by a new six-item *Hedonism* scale. A few item replacements were also made, mainly in the *Sun/swim* factor (Cf. Table 1 in the article). In addition, the response format was changed to a five-point scale, so that respondents were asked to indicate the importance of each item on a scale ranging from Not important (1) through Neutral (3) to Very important (5).

For the seven scales adapted from the previous studies, *alpha* values between .73 and .90 indicated a satisfactory *internal consistency*. Confirmatory factor analysis also yielded some support to the *single-scale measurement models* for these scales. The *alpha* values for the new Hedonism scale, however, were low (.46 to .52). Like the Indulgence scales in the initial studies, therefore, it was excluded from further analysis.

The seven remaining scales yielded *very high test/retest reliabilities*, with values ranging from .86 to .95. It should also be noted, however, that a statistically significant *difference between pre- and post travel motives* emerged in the powerful

repeated-measurements analysis. The interval difference between post- and pre-measurements (one week versus two months) had no significant effect.

3.3.3 Main conclusion: Confirming scale stability/durability

In view of the high test/retest reliabilities, it was concluded that the seven motive scale measurements are stable, lasting across a period of time. Also, it made no difference whether one week or two months had passed between the pre- and post-treatment measurements. In addition, the *relative* sizes of the seven mean motive scores are virtually unchanged after the trips.

We tend to interpret the statistically significant difference of the before/after effect as a result of an excessively powerful analysis. Being very small in absolute terms (about 1/80 of the full scale), a difference of this size is not likely to have any practical significance.

Apparently, the travel motives measured in the study are relatively lasting and stable phenomena. For the use of travel motives for predicting travel choices and behavior, this is a necessary, although insufficient precondition.

3.3.4 Methodological comments after Study III

3.3.4.1 Third replication

Viewing the study as a (partial) third replication, results may be interpreted as yet another confirmation of acceptable scale properties. The seven scales carried over from the initial studies exhibited acceptable alphas, and most scales were correlated. Confirmatory factor analyses also lend some support to the measurement models.

Item replacements were made on some scales. Retaining their good psychometric properties even after replacements, the scales appear to be fairly robust.

3.3.4.2 'Indulgence/hedonism' dimension problems confirmed

Although not covering exactly the same items, the 'Hedonism' scale of the present study is not completely different from the 'Indulgence' scale of the previous studies. Obviously covering parts of the same ground, the two scales could well have been two parallel measurements, intended to measure the same latent variable. This is may perhaps be taken as an indication that the failing measurements are not only due to an unfortunate choice of items. It may also suggest that our comprehension of the assumed phenomenon or latent variable is insufficiently developed.

3.3.4.3 Five-point scales

In this study, five-point scales replaced the previous four-point procedure. There was no indication of problems following this change. In view of the likely advantage of increased variance (cf. paragraph 3.2.4.2), then; this new practice can most likely be continued.

3.3.4.4 National standardization?

As already mentioned in paragraph 3.2.4.1, small samples may be inadequate for correctly assessing scale properties. Also, a *standardization* of the scales should be done, providing 'yardsticks' for evaluating both individual scores and group means obtained from the scales. At this point, therefore, the development of scale standards through the use of a sizable national sample was a tempting idea.

3.4 Study IV, the national standardization (Kleiven, 2000)

3.4.1 Main purpose

A major worry underlying the initial studies was the limited sample size. In small samples, random variations in the data set may be mistaken for substantial and interesting findings. Even after two promising replications in limited samples, a new replication with a larger sample was therefore clearly a prudent next step.

A nationally representative sample then appears to be the obvious choice. Firstly, the motive measures were known to correlate with central socio-demographic variables. Hence, convenience samples should be ruled out, and demographic variance should be maximized. Secondly, a nationally representative sample would offer a chance of establishing national standards for the scales. With national standards and normative data given, new surveys could be planned with less demanding sample selections.

3.4.2 Short summary of Study IV

By this time, the scales had been presented at an international conference (Kleiven, 1999), and a proper name was needed to identify the scales. Acknowledging their origin in the Travel & Tourism Unit at Lillehammer College, '*The Lillehammer scales'* was felt to be an appropriate label.

The eight 'Lillehammer scales' of travel and leisure motivation were included in a nationally representative survey, conducted by Statistics Norway (Teigum, 1996). A final sample of 1334 was obtained. Access was also gained to data on sociodemographic variables and nature-based leisure (Vorkinn, Aas, & Kleiven, 1996).

Results indicated that seven of the scales again had acceptable reliability, with *alphas* ranging from .70 to .81. The *alpha* of the *Friends* scale, however, was only at .62. Confirmatory factor analyses further showed that the measurement model for

each scale fits the data reasonably well. As in previous studies, there were substantial inter-scale correlations.

Nationally valid 'standards' for the scales were established, facilitating the use of scales in later non-representative user group or guest surveys. Neither floor or ceiling effects were apparent, given scale means ranging from 2.72 to 3.77. The *Family*, *Friends*, and *Peace/quiet* dimensions received higher mean scores than the *Culture* and *Accomplishment* ones, consistent with previous results. The standards have also been published in a semi-popular report in Norwegian (Kleiven, 2001), which includes basic advice on using the scales in simple travel research and student projects.

Although not a main focus of the study, it indicated obvious demographic differences in mean scale values, confirming previous findings. Gender differences is a clear example of this: For all scales except *Accomplishment*, the mean for females was significantly higher than for males.

The multiple regression results may appear promising. However, low r^2 values indicate that only a small part of the variance is explained. It is likely, therefore, that more complex models including other variables will be needed for really useful predictions.

3.4.3 Main conclusion of Study IV

The scales replicate well also in this study. This may be taken to indicate that:

1. Random noise in the initial small samples is not likely to have influenced the results much.
2. The scales in the present study appear to represent the same latent variables as the initial studies.

For all scales but one, *alpha* values indicated good internal consistency or reliability. And while the reliability of the *Friends* scale may need improvement, it

does not render the scale completely useless. Both multiple regressions and preliminary SEM models yield results on validity that may be viewed as encouraging.

Until improvements or better alternatives appear, therefore, cautious use of the scales can be advocated. The scale results of the present study may then be used as national norms for the scales.

More information is clearly needed on the question of validity, however.

3.4.4 Methodological comments after Study IV

3.4.4.1 Unsolved problems with Friends scale?

The low *alpha* of the *Friends* scale (.62) of course is a problem, but actually is rather consistent with previous findings (.59, .60, and .77/.73 in studies 1, 2, and 3, respectively). Quite likely, there is some room for improvement on this scale. This challenge has to be left for future research, however.

3.4.4.2 Demographic variation, samples, and national norms

The observed gender differences may serve as a reminder that sociodemographic variables may influence results on the eight scales. Care must be taken, therefore, that such variables be controlled in the design of future investigations.

The national norms now available may provide baseline data for the correct assessment of the motive state of convenience samples and special populations.

3.5 Study V, the predictive validity study (Prebensen & Kleiven, 2006a)

3.5.1 Main purpose

For practical use, the acid test of the motive scales is their predictive validity. Will the variables thus measured actually predict peoples' vacation decisions and leisure behavior? This is the basic research question of this study.

A major complication in making this assessment, however, is peoples' gregarious behavior. Friends and families not only tend to make vacation decisions together, but also frequently take their trips and enjoy their activities as a group. Social influence may be unevenly distributed, however, so that *individual* motives are not necessarily influential in *group* travel and activity decisions. Some middle-aged Scandinavian males, e.g. at times appear visibly less enthusiastic about their sun/beach experience than do their female travel companions. Leaving the example aside, it may remind us that while some individuals' motives may predict group dependent behavior rather well, this may happen at some expense to the wishes and wants of other individuals.

An additional aim of the present study, therefore, was to differentiate between *Decision makers*, i.e., the travelers actually deciding on the trip in question; and travelers less directly involved with this decision.

3.5.2 Short summary of Study V:

Charter tourists, so important to the Norwegian tourism industry, were subjects (N=1222) in a survey targeting the question of motive – behavior correspondence. The survey data employed in the present study include the tourists' definition of *holiday type*, their *motives* for traveling, and their *behavior* at the destination.

If the motives of some individuals are more influential than others, however, the expected influence of individual motives on vacation choice and behavior may be

attenuated. An additional aim of the present study, therefore, was to differentiate between *Decision makers* and others.

Holiday type was assessed by having the travelers check one item in a list of five alternatives: *Sun-beach trip*, *Round-trip*, *Big city visit*, *Alpine tour*, and *Cruise*.

The travel motives were assessed by an adapted version of the eight scales, again replacing the *Nature* with the *Hedonistic* scale after consultations with our co-operating travel company. Minor alterations were also made to two scales. In the *Family* scale, the item *Being with the children of my relatives* was left out; and in the *Culture* scale the items *Going on organized excursions* and *Experiencing landscape and nature* were added.

Two summed-score **activity scales**, defined through a factor analytic grouping of a larger set of activities, were used for measuring activity at the destination. The two activity scales were given names describing their respective coverage: *Traditional charter-sun* activities and *Learning about destination*.

Not all parts of the study are equally relevant to our present purposes, and not all discussions will be covered in the present summary. However, the complete list of hypotheses for the study was:

1. The majority of Norwegian charter tourists will view themselves as *Sun/beach* tourists.
2. A substantial minority, however, will not primarily associate themselves with this common kind of trip. This group will choose other labels for appropriately describing their charter experience.
3. The two groups will have different motives for their travel, and the motive scales will consequently help predicting travelers' type of trip.
4. The two groups will use the two activity types differently. While the *Sun/beach* tourists will perform *Traditional sun/beach-related* activities more often, the *Other* tourists will use the *Learning about destination* activities more.
5. The travel motives will also influence participation in the two activity types *directly*, not only through its influence on the type of trip.

6. Travelers responsible for choosing this specific trip will have stronger relationships between motives, type of trip, and activity type than will the people less involved with the decision.

Decision makers. In the analysis the sample was divided into two different groups. The 71% majority group, the *Decision Makers*, actually made the travel decisions themselves. The second group of *Non-Decision Makers* (29%) were subject to random factors or to other people's decisions when the vacation was decided.

Holiday type. Most respondents (80%) identified themselves as going on a *Sun-beach* trip. The remaining 20% were labeled as *Other tourists*. They had identified themselves as participating in a *Round-trip*, a *Big city visit*, an *Alpine tour*, or a *Cruise* type of vacation.

Motives. Consistent with central literature in this field, several motives are important to most persons, confirming the multidimensional approach of our set of scales. *Peace/quiet*, *Culture*, and *Sun/warmth* scales received the highest scores in the sample, while the *Accomplishment* scores were rather low. The *alpha* values ranged from .64 to .84.

ANOVA results indicate that the *Sun-Beach* group generally had higher motive scores than the *Other tourists*. More importantly, however, there was a significant interaction effect between this group factor and the scale differences. While the *Sun-Beach* group scored higher on *Peace/Quiet*, *Sun/warmth* and *Family* scales; the *Other tourists* group did on *Culture* and *Accomplishment*.

Activity scales. The *Learning about destination* scale had an alpha value of .77, while the *Traditional charter-sun* activities scale had .64.

The mean scores of the activity scales were modest. *Traditional charter-sun* activities scored 2.8 (close to 3: "less than one hour per day") on the six-point scale. *Learning about destination* activities scored 2.2 (close to 2: "one or a few times during the stay").

Path analysis. In a path model, five out of the eight motive factors were shown to predict holiday type rather well, explaining a large part of the variance. Also, prediction of *Traditional charter-sun activities* from *Holiday type* and motives *Family*, *Sun/warmth* and *Peace/quiet* was more than adequate. Finally, the variable *Learning about destination* activities was very well predicted from *Holiday type* and motives *Sun/warmth, Peace/quiet* and *Culture.*

Some differences are found between *Decision makers* and *Non-decision makers*; most path coefficients are slightly larger and more variance is explained for the *Decision makers*. However, the data are not completely convincing, and the specific analysis employed does not provide a formally correct test of these group differences. Further work, therefore, should be directed at this central question.

3.5.3 Main conclusions of Study V:

By and large, the hypotheses of this study were confirmed. The better part of the respondents view themselves as *Sun-beach* tourists, and the motive patterns of this majority is clearly different from that of *Other tourists*. The two groups also engage in partly different activities. *Motives* also serve as direct predictors to activity type, not only indirectly through its influence on *Holiday type*.

While the study suggests interesting differences between *Decision makers* and *Non-decision makers,* further work is needed before concluding on this point.

At any rate, results indicate that the motive scales have some validity in this context. Motives do predict charter travelers' choice of holiday type, as well as their choice of activities at the destination. Hence, the motive scales may be a useful tool for the assessment of wishes and wants underlying the Norwegian holiday charter market.

3.5.4 Methodological comments after study V:

To accommodate the perceived information needs of the cooperating travel company, some alterations were made to the motive scales. A *Hedonistic* (Indulgence) scale was

reintroduced, at the expense of the *Nature* scale. Also, individual items were replaced in some scales. In principle, this will limit the usefulness of comparing results across the different studies.

By and large, however, even the abridged scales still appear to cover the original motive concepts. More importantly, five motive scales predict vacation type and destination activities rather well, suggesting an interesting level of predictive validity. Also, scale reliabilities are comparable to those found in earlier studies. It appears, therefore, that these scales are fairly robust to minor changes.

The predictions shown, however, should not be endowed with too much importance. To some extent, both motives, vacation type and activity type are measured through questions related to *activities*. Most notably, the *Sun/warmth* motive is assessed through the importance respondents attach to sunbathing and swimming activities. It is not surprising, therefore, that the people who identify themselves as "Sun-beach" vacationists also generally have high *Sun/warmth* motive scores — and actually engage in "Traditional charter-sun" activities at the destination. Clearly, parts of this pattern may simply indicate cognitive consistency in the respondents, and do not necessarily represent a true empirical finding.

On the other hand, not all results lend themselves to this simple explanation. Firstly, *Sun/warmth* is only one out of five motives predicting vacation type; also four other motive measures contribute significantly. Secondly, the "Traditional charter-sun" activities also include visiting restaurants, shopping and reading "other literature" (not about local culture or attractions); i.e., activities not conceptually related to sunbathing, beach or swimming.

And, more importantly, the "Other tourists" represent far more than a simple opposite pattern of non-sun, non-swim activities. They have high scores on the Accomplishment and Culture scales, neither of which represent obviously similar activities. Furthermore, the "Other tourists" engage in destination-specific reading and experiences on the destination, activities that do not relate to the words or phrases employed in the motive scale items.

A prudent conclusion, nonetheless, is that future research on leisure motives should avoid scale items with words that also relate to the very behavior that is to be predicted. If not, there is a danger of tautologies and self-evident correlations.

4. GENERAL RESULTS: Summing up

For the present purpose, only selected parts of the main results will be presented. The intention will be to bring forward what is needed to discuss the three main research questions.

The project's primary question (identifying motive dimensions) partly depends on the two others – constructing scales and exploring scale properties. Hence, our information on single scales and their properties will be presented (4.1) before the data on composite, multidimensional measurement models are discussed(4.2).

Of course, this bird's-eye view leaves a number of subsidiary details and problems on the side. In Chapter 3, selected methodological comments and problems were discussed for each of the five studies. Hoping that the information will be useful – and that there will be people interested in continuing or supplementing our work – some information on these matters will be summarized in sub-chapter 4.3.

4.1 Single-scale properties

There is some variation in the scales between the different surveys and the different scale versions. Comparisons thus have to be made cautiously, and providing a combined view is not an entirely trivial task. To avoid excessive detail, the status of the scales after the five surveys will be summed up in a *general* way, taking the liberty of reducing some of the complexity.

This subchapter, then, opens with an overview of scale reliability (4.1.1), and then proceeds to validity (4.1.2). Information on other single-scale scale properties may be found in paragraph 4.1.3. Properties of *individual* scales are then summed up in paragraph 4.1.4.

4.1.1 Reliability

4.1.1.1 Cronbach alphas

Reliability scores (Cronbach's *alpha*) for the different sets of scales are summarized in table 1. Of course, the usefulness of direct comparisons is limited by slight variations in scale content. Nonetheless, the general picture clearly is encouraging; most reliability scores are at .70 or above. Generally, therefore, the internal consistency of scales appears to be satisfactory. The prime exception is the *Indulgence* scale ("Hedonistic" in study 5), which actually was excluded from two of the studies. The *Friends* scale also yields low alphas (.59 - .62) in the three studies.

Table 1. Cronbach alphas of scales in five studies

Study and scales	*I: Initial survey*	*II: First replication (Revised)*	*III: Stability check**	*IV: National survey*	*V: Predictive validity study*
SUN/WARMTH	.69	.76	.87/.81	.71	.84
ACCOMPLISHMENT	.76	.75	.79/.83	.73	.81
FAMILY	.71	.74	.84/.80	.72	.64
FRIENDS	.59	.60	.77/.73	.62	.74
CULTURE	.72	.80	.82/85	.73	.85
NATURE	.70	.83	—	.81	—
PEACE/QUIET	.64	.63	.75/81	.70	.85
FITNESS	.81	.74	.87/.90	.79	.88
INDULGENCE	.51	—	.46/.52	—	.67

* Alphas of both pre- and post-travel scores are shown

4.1.1.2 Test-retest reliability

As shown in study III, test-retest correlations[6] were in the range of .86 - .95. Clearly, *motive scale measurements are stable*, whether one week or two months had passed between the pre- and post-treatment measurements. In view of the fact that the *relative* size of the seven mean motive scores are virtually unchanged after the trips, the statistically significant before/after mean difference appears not to be very important.

4.1.1.3 Confirmatory Factor Analysis of single scales

Traditional summed-scale measurements imply a *parallel measures* model (Pedhazur & Schmelkin, 1991, p. 684), assuming that the "true" scores of the single items within the scale as well as their error variances are equal.

Our analyses in study I and II indicate, however, that neither *parallel measures* models nor *tau-equivalent* models (assuming that true item scores are equal) fit our data very well. Clearly, the more flexible *congeneric* measurement models are more appropriate for our data.

This is a potential problem. Since, *in principle*, simple summed scales and congeneric measurement scales may have different properties, direct comparisons between the two types of scales are not straightforward. In summed scales, all items carry the same weight when means are calculated, and error scores are assumed to be equal. In a congeneric measurement scale, however, these restrictions do not apply. Here, items may have *different* factor loadings (Raykov & Marcoulides, 2000, pp. 113-120), as well as different error variances (Kline, 2005 , p. 189). It is possible, therefore, that the simple summed-scale means and the latent congeneric measurement means are somewhat different.

[6] Cf. part 3.3.2; correlations not to be confused with the *alpha* values of table 1,

Throughout our studies, however, the results of the two types of scale construction have been used interchangeably. When reporting, e.g., *alpha* values, and simple scale means from simple summed scales, the parallel measures model is assumed. In Confirmatory Factor Analyses and other SEM models, however, the congeneric approach has been employed. A central question, therefore, is whether or not the two different scaling approaches produce comparable results based on our data.

Table 2. Correlations between summed-scale and congeneric scale measures

Scales	*Correlations*
SUN/WARMTH	.979
ACCOMPLISHMENT	.981
FAMILY	.944
FRIENDS	.995
CULTURE	.991
NATURE	.950
PEACE/QUIET	.974
FITNESS	.988

Table 2 displays the correlations between the two scale versions for the eight motive dimensions from study II. Clearly, summed scales and congeneric scales largely carry the same information. For analyses based on correlations or regressions,

therefore, keeping the two types of measures apart will hardly be important in our data.[7]

Consequently, Confirmatory Factor Analyses may shed some light also on simpler summed scales, even if congeneric measurements are assumed. And in most cases, also single-scale CFA yielded encouraging results. There are a number of interesting complications, however.

In Study I, acceptable fit was obtained on eight out of nine scale measurement models. Only one scale (*Family*) had clearly unacceptable fit indices. In Study II, only five out of eight single-scale measurement models are supported by the data. The *Family* scale has problems also here. In addition, neither the revised *Culture* scale nor the *Fitness* scale has acceptable fit indices. Study III fares slightly worse. Here, only four pre-test and three post-test measurement models appear to fit the data without problems.

In the National study (Study IV), things look better. Although most Chi-square values are too high, all other fit indices testify to good fit between model and data. In the final study (Predictive validity), only summed-score scales are reported.

In the motive scales with fit problems in the four studies reporting CFA, better fit could commonly be obtained by very small alterations of the measurement model. Simply by allowing error terms of two items to be correlated, acceptable fit indices would often be obtained. If scales that perhaps are not strictly unidimensional are acceptable, also measurement models with this modification may be useful for our purposes.

Summing it all up, then, the CFA results on the single scales do lend some support to most motive scales. It should also be noted that through the CFA efforts, a rather detailed understanding is obtained of the problems with imperfect measurement

[7] The *latent means* of the congeneric measurements, however, use a metric that is quite different from the 4-level original metric of the data. Hence, they should not be compared to the arithmetic means of the summed scales.

models. This may safely be counted as an improvement on the limited scale analysis information available from the Cronbach's alpha computations.

4.1.2 Validity

Preliminary analyses in several studies suggest that the scales do have promising ability to predict leisure behaviors. In Study I, strong relations between scale measurements and leisure behaviors were shown, holding up in simple correlations as well as in multiple regression models. In addition, Study II suggests that motive scales' power to predict vacation behaviors should be researched within more comprehensive MIMIC models, including central demographic predictors as well.

Study III does not address the motive – behavior relations directly. It may perhaps still be noted, however, that the sample of Norwegian outbound travelers score *higher* on the *Sun/swim* and *Culture* scales than the nationally representative sample in Study 4. While not proving the validity of these scales, the results at least are consistent with the strong motive/behavior correlations of the initial studies.

In study IV, scales are shown to predict a set of leisure behaviors in multiple regression models. The study also suggests, however, that scales' predictive ability should be investigated within more complex effect models, including central demographic variables.

The most direct test of scales' predictive validity was performed in the final study (Study V). Here, motive scale scores predict charter travelers' choice of holiday type, as well as predicting a number of travelers' activities at the destination. In the context of charter tourism, therefore, scales may well prove useful.

4.1.3 Other scale properties

The scales apparently are doing well not only in terms of reliability and validity, but also with respect to other potential measurement problems.

4.1.3.1 Data acquisition procedure

The data gathering technique proved simple and efficient: Respondents were asked to check response alternatives along 4- or 5-point scales in a questionnaire. In all surveys, most respondents used the scales in the manner expected, responding freely and without complaining about procedure or situation. Except for study II, the number of response refusals was in general low, also supporting our impression that the practical procedure functioned in a satisfactory manner.

4.1.3.2 Floor or ceiling effects

Floor or ceiling effects are not evident. On the 1-5 scale used in the national survey (Study IV), e.g., means range from 2.72 to 3.77. Clearly, responses do not cluster towards the ends of the scales. Also, responses are fairly well distributed around the means, with standard deviations in the range 0.76-0.92 and standard errors of the mean between 0.02 and 0.03.

4.1.3.3 Relative size of scale means

As shown in figure 2, the relative sizes of the motive scale means do not change much across the five studies. For all studies, profiles are roughly parallel.

Viewing the graph in more detail, it may first be noted that the profile for Study IV closely parallels those of studies I and II. Since studies I and II employed a measurement scale running only from 1 to 4, however, their means are of course lower than the others, and appear lower down in the graph.

Secondly, the pre- and post-travel measurements of study III are very similar, consistent with Figure 1 in the Prebensen & Kleiven (2006b) article. In addition, these two profiles come rather close to the shape of the motive profile of the predictive ability study (Study V). The sample in both studies consists of travelers going abroad for vacations, not a sample of the general population. Hence, some similarity should perhaps be expected.

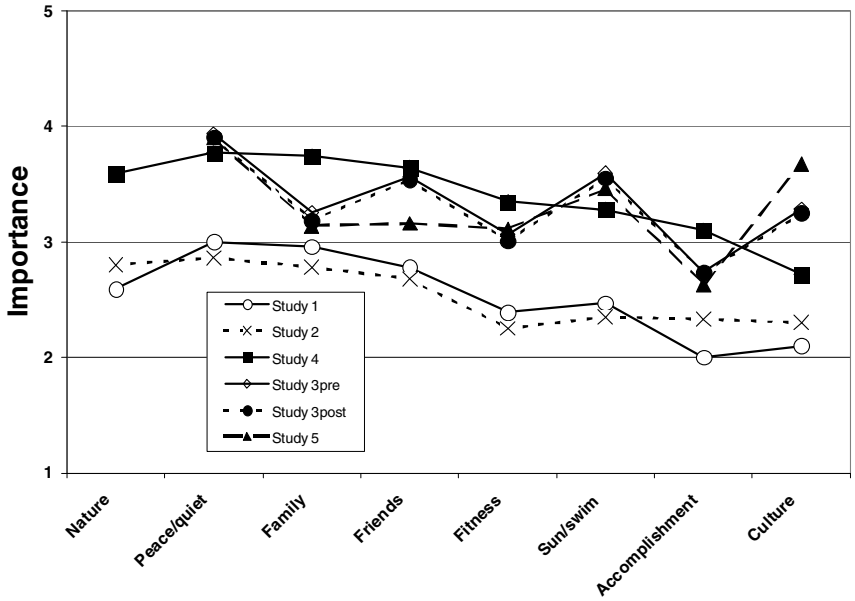

Figure 2. Motive scale means[8] in five studies

Comparing these studies to the National survey (Study IV) is also instructive. While the mean motive scores of this survey often are higher than the two traveler surveys (Studies III and V), the difference is reversed on three scales. On motive scales *Peace/quiet*, *Accomplishment*, and *Culture*, the two traveler samples score higher than the more general, national sample.

Scale means of the *complete* set of five studies are not easily compared, however, and including 4-point and 5-point scales in the same graph may cause some confusion. To obtain scale scores that allows at least some crude comparisons across all studies, scale means may be converted to rank scores. Within each study, the scale

[8] Scale 1-4 is used for studies I and II, and 1–5 for the remaining three. The *Nature* scale was not used in studies III and IV.

means were ranked from the highest through the lowest, yielding a rank score for each scale.

Table 3 displays the rank scores of all scales from all studies. Based on the relative order of scale means in the five studies, an interesting picture emerges. Five of the scales seem to have rather stable positions. The most important motive dimension clearly is *Peace/quiet*, having the highest rank (the rank of 1) in all studies. *Fitness* and *Accomplishment* apparently belong to the opposite end, consistently yielding low rank numbers (ranks 5 – 7 and 6 – 9). The *Family* and *Friends* scales are often found among the middle-ranking motives.

Table 3: Rank order of mean scale scores in five studies

Study and scales	*I: Initial survey*	*II: First replication*	*III: Stability check**	*IV: National survey*	*V: Predictive validity*
SUN/WARMTH	6	5	2	6	3
ACCOMPLISHMENT	9	6	7	7	8
FAMILY	2	3	5	2	6
FRIENDS	3	4	3	3	5
CULTURE	8	7	4	8	2
NATURE	5	2	—	4	—
PEACE/QUIET	1	1	1	1	1
FITNESS	7	8	6	5	7
INDULGENCE	4	—	—	—	4

* Only one rank number is shown, since pre- and post-travel scores had identical ranks

Motives *Sun/warmth* and *Culture* show less consistency. While generally low-ranking, *Sun/warmth* and *Culture* rank more highly in the two Prebensen & Kleiven studies (III and V). This may reflect real differences between the three samples representative of demographic populations and the two samples of outbound tourists.

It does make sense that outbound tourists actually value *Sun/warmth* and *Culture* relatively higher than does the population at large. High scores on these motives may indicate their very reasons for being outbound tourists.

Differences in the item composition of scales reduce the value of such direct comparisons, however. To avoid some of these complications, it may be prudent to focus again on the three studies representative of general populations; i.e., studies I, II, and IV.

Then, the relative importance of the different scales appears to be remarkably consistent across the three representative studies. *Peace and quiet* obviously is Norwegians' most important motive for leisure and vacations (mean rank of 1), followed by *Family* (mean rank 2.3) and *Friends* (mean rank 3.3). At the opposite end, *Accomplishment* (mean rank 7.3) and *Culture* (mean rank 7.7) represent the low-ranking positions, indicating motives that are clearly less important to Norwegians' leisure and vacation decisions.

It is no surprise, therefore, that the combined results of the three representative studies come very close to what is implied by the national scale standards from study IV.

4.1.3.4 Scale means and demographics

Scale means are commonly not constant across demographic differences, but vary with changing demographics. A simple example is provided by Study IV (The national study), showing significant gender differences. In seven out of eight scales, male score means are higher than female scores.

A perhaps more interesting example is shown in figure 3 below. Based on data from the national study, respondents were grouped according to six life stages:

1. Single persons below 45 years of age
2. Couples below 45 years of age
3. Families with small children
4. Families with children in school
5. Couples, 45 or older, without children living at home
6. Single persons, 45 or older

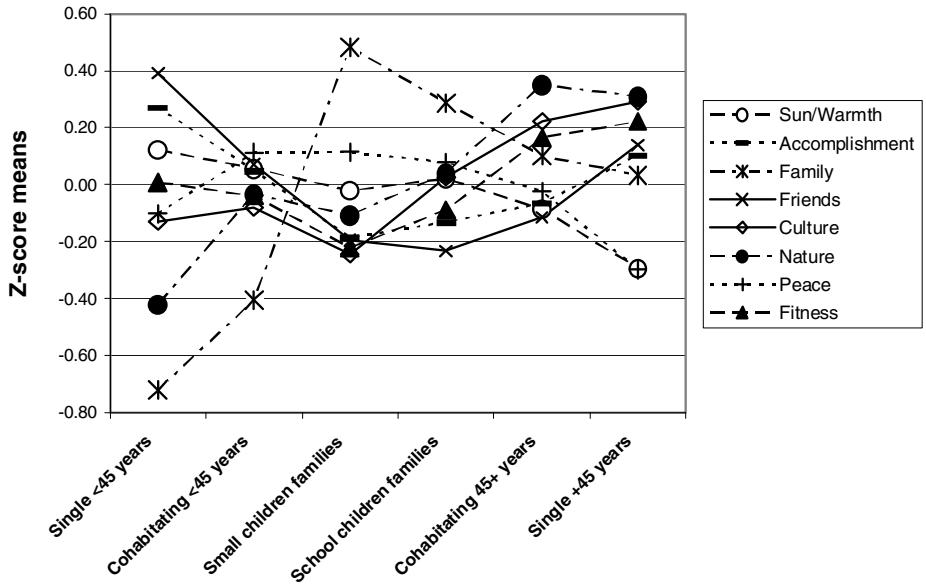

Figure 3. Motive scale means in six life phases, unpublished data from study IV

Although the figure is complex and not easily readable, a couple of comments may be made. Generally, the data appear to reflect different priorities in different life stages. The *Family* motive, e.g., is relatively unimportant to young singles and childless couples. With children in the family, however, it obviously rises to

importance. The *Friends* motive shows an almost opposite trend, being most important to the first two and the last two (childless) stages. To people with children in the "middle" phases of life, friends are relatively less important.

The *Nature* and the *Sun/warmth* motives also show interesting differences. While the *Nature* scores generally increase throughout the six stages, the importance of *Sun/warmth* appears to be decreasing. Clearly, there are interesting and perhaps comprehensible life stage differences in the motive scores.

Further preliminary analyses of study IV indicate even more demographic effects on motive scores; e.g., regional differences. This is outside the focus of the papers included in the present discussion, however, and will be presented elsewhere.

4.1.4 The performance of individual scales

Taken as a whole, then, the set of scales appear to have rather encouraging properties. It is also evident, however, that not all scales perform equally well throughout our series of studies. A closer look at each scale separately will make this even more evident.

Unfortunately, this implies some repetitions of previously presented information. In view of the extent and the complexity of the findings, however, the reader will hopefully excuse this redundancy.

4.1.4.1 Sun/warmth

This scale consistently yielded *alphas* above .70. Minor variations probably reflect slight changes in the items included in the summed scale. Its test-retest correlation in Study 3 was .93. In most studies, also Confirmatory Factor Analyses yielded some support to the measurement model. While chi-square values were too high in studies I, II, and IV, acceptable fit was indicated by other fit indices. CFA of the pre-test measure of study III also yielded an acceptable chi-square.

While the reliability of this scale thus is fairly well established, its validity is more difficult to assess. Strong correlations were indeed found with sun/swim

activities in several studies, and the sun/warmth motive does contribute significantly to the prediction of Holiday Type in study V. As will be discussed later, however, *Sun/warmth* motive measures and *Sun/swim* activity measures may be difficult to keep apart conceptually. Consequently, their correlation may reflect a trivial logical necessity, not an empirically founded relationship.

In the national survey, the mean of the *Sun/warmth* scale was 3.28 on the range 1 – 5, with females scoring significantly higher than males. This is consistent with the findings in the two initial studies, indicating a motive of only medium/low general importance. In the two outbound traveler studies, however, this motive was clearly among the more important ones.

4.1.4.2 Accomplishment

Alphas were generally strong also for this scale, with versions ranging from.73 to .83. In study 3, the test/retest correlation was .86.

CFA clearly supported the slightly different measurement models for this scale. With the exception of study I and the post-travel measure of study III, chi-square values were low. Other indices were consistently high.

Validity information on this scale is limited. In the multiple regression of study I, however, it significantly related to the activity of *Renting a video*. The scale also contributes to the prediction of *Games and Play at Beach/Pool* and *Taking a walk*, however negatively. In study II, it correlates significantly with *Concert/Theater*. In a more complex model in study IV, *Accomplishment* contributes to predicting men's *Sea Fishing*. These motive/behavior relations may intuitively make sense. More information is obviously needed, however, on the validity of this scale.[9]

[9] *Accomplishment* has been shown to be the *only* motive factor distinguishing a sample of Norwegian golfers from the general population (Berg, 1998; Kleiven & Berg, 2003)

The scale mean for *Accomplishment* is low in the two initial studies, suggesting that this motive is not among the important ones. In the national survey the scale mean was 3.10, confirming that the scale belongs among the generally less important.

4.1.4.3 Family

In the first four studies, the alpha of the *Family* scale was at a satisfactory level (.71 - .84). In the fifth study, however, the alpha was down to .64, perhaps suggesting problems with the 3-item scale version employed in this study. Moreover, the test/retest coefficient in the third study was at .95, indicating a very stable measure.

Results of the CFA are mixed, however. In the two initial studies, the measurement model appears *not* to fit the data very well. In the third (stability) study, nonetheless, pre- and post-travel measurement models both agreed very well with the data. CFA results of the fourth (national) study failed the chi-square test, while other indices were acceptable (.90 or higher).

There is some information on the validity of the *Family* scale. In the multiple regression of study I, it was positively associated with the leisure activities of *Games and Play at Beach/Pool* and *Short Drive with Family* – and negatively with *Renting a Video*.

In study II, the *Family* factor correlates positively and significantly with the activity *Visit relatives or friends* only. This, of course, may reflect the same problem as suggested for the sun/swim scale. This specific correlation may be due to similarities between the motive items and the activity question, however, and is not necessarily a true empirical finding.

The scale is also negatively associated with several activities in study IV, however. *Jogging*, *alpine skiing* and *Outdoor swimming* apparently are not among the activities favored by the *Family* oriented respondents of this national study. And in the path model of study V, the *Family* scale contributes to the prediction of *Holiday type* as well as *Traditional charter/sun activities*. There are several suggestions in the data, therefore, that this scale may have some predictive validity.

The mean of the *Family* scale is high in the three generally representative studies (I, II, and IV), ranking as the 2nd or 3rd in importance. Clearly, this is a central dimension. In the two studies of special populations, however, *Family* is less important. Here, it apparently looses its standing to the *Sun/warmth* scale (Cf. the paragraph on that scale above).

4.1.4.4 Friends

There may be a reliability problem with the *Friends* scale, as suggested by the *alphas* between .59, and .62 in studies I, II, and IV. The two traveler studies (III and V), however, yield better alphas (.77/.73 and .74). Also, the test/retest coefficient of .92 in the third study supports some confidence in the reliability of the scale.

CFA models also give mixed results for this scale. In studies I and IV, results fail to meet the chi-square test, while other indices support the measurement model. In study II, the chi-square value is acceptable, while the RMSEA is not. And in study III, the pre-travel measurement passes the chi-square test, but the post-travel measure does not. Taken together, therefore, the CFA results do not convincingly support the measurement models.

In our five studies, there is rather limited information about the validity of the *Friends* scale. In the multiple regression of the first study, it does contribute significantly to the prediction of *Renting video*. In the second study, it is positively and significantly correlated with *Boating or fishing trips at sea* and *Visit relatives or friends*. While the latter correlation may reflect a logical or language-bound relationship, the correlation between *Boating* and *Friends* hardly does. Finally, the *Friends* scale contributes to a multiple regression equation on *Alpine skiing* in the fourth (national) study. All in all, therefore, the validity information on the *Friends* scale appears to be inconclusive and insufficient.

The mean scores of this scale consistently fall among the middle ranks, suggesting that the *Friends* motive is neither very important nor very unimportant to most respondents.

4.1.4.5 Culture

The reliability of this scale appears to be adequate, with alphas in the range .72 - .85. The test/retest coefficient of .95 in the third (stability) study adds to this favorable impression.

CFA results are inconclusive, however. In studies I and IV, the chi-square test fails; while other fit indices support the measurement models. In study III, the pre-travel measure does not stand up to the chi-square test, but the post-travel measure does. In study II, only insufficient support is found for the simple measurement model.

The validity of this scale is reflected in several parts of the data. In study I, *Culture* contributes to predicting *Going to Art Exhibition* in a multiple regression. In the next study, it is significantly correlated with *Go to Concert or Theater*, and also holds its position in a more comprehensive MIMIC model.

In the fourth (national) study, it is shown to be a useful addition in multiple regression equations predicting *Sea Fishing* and *Short Walks*. It also contributes significantly in a larger MIMIC model of influences on *Sea Fishing*. In the path model of the final (predictive validity) study, the *Culture* scale contributes to predicting *Holiday Type* as well as to *Learning at Destination* activities.

Like those of the *Sun/warmth* scale, the means of the *Culture* scale have low ranks in the three general surveys (I, II, and IV) – but the scale turns more important in the two traveler surveys (III and V). Of course, also the *Culture* motive may be part of the reason why people travel abroad.

4.1.4.6 Nature

The *Nature* scale appears only in the three generally representative surveys, yielding acceptable *alphas* in the range .70 - .81. Reliability, therefore, is not likely to prove a problem here.

Through CFA of the congeneric measurement models for the scale, however, even more encouraging results are found. Both initial studies (I and II) show that the model fits the data very well. In study III, the value of chi-square is a bit too high, while all other indices suggest an excellent fit.

There is also positive information on validity, however limited. As one perhaps might suspect, the initial study (I) indicates through multiple regressions that *Nature* is strongly related to the activities of *Taking a walk* and *Fish or Hunt in Season*. Perhaps more surprising, it also adds significantly (and positively) to the prediction of *Going to Art Exhibition*. In study II, the *Nature* scale is shown to correlate with *Boating or fishing trips at sea* and to *Going for a walk in nature*. More importantly, however, it is useful in examples of more comprehensive MIMIC models. In (the national) study IV, *Nature* is positively related to *Sea Fishing* and *Short walk* in multiple regressions. Less self-evidently, it is also negatively and significantly related to *Alpine Skiing*. There are indications, therefore, that the Nature scale may be valid for a diverse set of predictions.

The means of the Nature scale generally seem to fall among the middle ranks. This may suggest that the motive does play some part for most people, but hardly is an all-important consideration.

4.1.4.7 Peace/quiet

In general, the reliability data on the Peace/quiet scale may be viewed as acceptable for our purposes. The *alphas* show some variation, however, falling in the range between .63 and .84. The test/retest coefficient of .90 in study III also supports our conviction that the scale is reliable.

CFA results are even better. Excellent fit between measurement model and data is shown in studies I, II, and IV. In study III, however, only the pre-travel measurement model fit the data in a convincing manner.

For this scale also, information on validity should be viewed as indirect and incomplete. It is negatively (and significantly) associated with *Renting a Video* and *Going to Art Exhibition* in the first survey, however; and positively with *Sea Fishing* in the fourth (national survey). In the final study (V), *Peace/quiet* contributes to the prediction of *Holiday type* in the path model.

The most remarkable fact about the *Peace/quiet* scale nonetheless is its consistently high mean scores. In all five surveys, this scale has the highest mean score. Clearly, this dimension covers concerns or wishes that are generally important to most people in their leisure and vacation.

4.1.4.8 Fitness

Here, scale reliability clearly is adequate. The *alphas* all fall in the range of .74 - .90, and the test/retest coefficient in study III is at .87.

The results of the CFA are less convincing, however. In studies I and IV, the analyses fail the chi-square test, while other indices do support the congeneric measurement model. In studies II and III no such support is found.

As for validity, the *Fitness* scale is shown to predict *Taking a walk* and *Running/jogging* in the multiple regressions of the first study. Consistent with this, the scale also correlates significantly with activities *Physical training/sports* and *Going for a walk in nature* in the second study. *Fitness* is also associated with *Jogging* and *Short walks* in the fourth (national) study. Clearly, this motive dimension is a valid and interesting predictor of leisure activities related to physical exercise.

The means of the *Fitness* scale are generally low, as also indicated by its low rank scores in all the five studies. It thus appears to compete with *Culture* and *Accomplishment* for being the least important motive – at the bottom of the list.

4.1.4.9 Indulgence

The *Indulgence* scale in its diverse forms generally does not perform very well. An *alpha* of .38 caused it to be dropped from the second (replication) study, as well as from the fourth (national) survey. The remaining *Alphas* are also low (between .46 and .52), even if the fifth (predictive validity) study produces a value of .67.

Although not covering the same exact items, the 'Hedonism' scale of the third study is not completely different from the 'Indulgence' scale of the two first studies. Probably covering parts of the same ground conceptually, the two scales may be viewed as two parallel measurements intended to measure the same latent variable. The low alphas across several scale versions, then, may suggest an insufficient comprehension of the latent variable (or its assumed 'phenomenon'); and that an unfortunate choice of items may not be the only reason for recurring measurement problems.

It is a bit disturbing, however, to see in the initial study a very close fit between the congeneric measurement model and the data. Nevertheless, the consistently low *alphas* support the initial decision to leave the *Indulgence* dimension out of the discussion.

4.2 Multidimensional measurement models

Not only the single scales have been in focus, however. Throughout the five studies, different *sets* of scales have been used in our information gathering, and certain properties of some of these sets are known. Multidimensional measurement models may prove useful to our comprehension of some of these variations. Some comments will first be made to the specific models implied by the studies, before discussing more general points related to multidimensionality.

4.2.1 Specific multidimensional measurement models

While findings on most single factors may be seen as generally encouraging, problems appear when attempting to fit the scales into more comprehensive multidimensional models. Generally, our multi-factor measurement models are not convincingly supported by our data. An example of this is our replication of the original Beard & Ragheb (1983) scales.

This was the first multidimensional measurement model tested in our initial study. Here, the chi-square value showed clearly that there were differences between this model and the data, as did other fit indices.

It may be shown, however, that only minor modifications to this model were needed to produce acceptable fit measures. By allowing three out of the sixteen items to load on *two* factors and permitting four out of the 120 possible error covariations, a slightly different measurement model was produced. While the chi-square value still suggested an unacceptable fit, the revised model was supported by the other fit indices.

This general finding has been replicated a number of times in our series of tests of multidimensional measurement models. 'Original' models, assuming that all items load on one factor only and that error terms are uncorrelated, do not fit the data.

However, an improved fit may often be obtained by applying minor modifications of the model without changing its basic properties. The differences between model and the data are thus limited, and the complex measurement models share a number of characteristics with the relationships within the data matrices. The main result, nonetheless, is that the multidimensional measurement models do not fit the data in a satisfactory manner. This situation will be further elaborated in the discussion chapter.

4.2.2 General points on multidimensionality

In spite of the shortcomings of the multidimensional measurement models, however, these models may serve to illustrate a number of more general points about the multiple motive measurements and the inter-scale relationships.

4.2.2.1 Multi-motive approach to general population

The first 'multidimensional' comment may be trivial, but is nonetheless central: Throughout the five studies, data show quite clearly that *more than one scale* is important to most people. Certain dimensions may be more important than others, and not all people have the same priorities; but respondents weighting only one scale to the exclusion of all others hardly occur in our material. This is theoretically important; simple models implying one-motive typologies are not likely to match our data.

It should be borne in mind, however, that the motive dimensions employed in our surveys are rather *common*, i.e., applicable to most people's leisure activities. It is within 'mainstream' vacation and leisure that our findings suggest that some balance is common between different aims, wants and wishes; apparently reflecting the simultaneous influence of several motives.

Nevertheless, more dominant specific motives should not be completely ruled out. Single-motive models may be more adequate in special interest groups than they are in the general population. People regularly engaging in base jumping or single-handed ocean racing, e.g., may have extreme priorities, excluding several common leisure motives from consideration. Even normal, sensation-seeking youths may at times invest so much in achieving specific leisure experiences that more mundane concerns (relating to family and friends, e.g.) are largely forgotten. Simple and uni-dimensional motive models may well be more appropriate to special-interest groups with a limited focus, therefore, than to our large and heterogeneous samples.

4.2.2.2 Correlated, not independent dimensions

A second point is perhaps less trivial: Motive dimensions should *not* be construed as orthogonal or uncorrelated. In our five studies, measurement models with correlated motive dimensions are much closer to the data than models where the dimensions are assumed to be orthogonal, as shown when comparing SEM measurement models.

In the national survey, e.g., the LISREL *Phi* values (Φ, inter-scale correlations) of the eight-factor measurement model range between .08 and .75. The *Nature* factor shows a modest .08 correlation with *Sun/Warmth*, while its .75 correlation with *Peace/quiet* is very high. All other scale intercorrelations fall between these two extremes. Clearly, then, orthogonal factors is hardly a tenable approach to the measurement of these eight factors.

4.2.2.3 Divergent validity

At the same time, *Phi* values are not excessively high, as to threaten the divergent validity of the scales. Even a .75 correlation explains only 56% of the variance, leaving substantial room for variance that is unique to each scale.

More importantly, even highly correlated scales cover distinctly different concepts. Some benefits of *Nature*, e.g., may be obtained close to waterfalls, noisy crowds or thunderstorms where *Peace/Quiet* is not evident. And *Peace/Quiet* may certainly be sought in a quiet room inside your home, not only in the Great Outdoors.

The high inter-scale correlations, therefore, bring witness to *empirical relationships* within Norwegian leisure and vacation behavior. It is very common for outdoor recreation in this country to provide nature experiences, quiet environments and exercise at the same time. Accordingly, outdoor recreation is sought for a variety of reasons, motives or purposes. People wanting other benefits are more likely to spend their leisure time in other contexts. Hence, some correlated motives are to be expected.

4.2.2.4 Secondary factors in measurement models?

The correlated motives may also give rise to a notion of *secondary* motive factors. Effort has been made, therefore, to look for evidence of "superordinate", second-order motive factors in the different data sets.

One likely candidate could be a motive cluster containing *Nature*, *Fitness* and *Peace/Quiet*, all highly intercorrelated in our National survey (Study IV). This cluster would also be consistent with the suggestion made by Kleiven (1998a, p.32) that Haukeland's (1993) *"Traditional Norwegian Holiday Dream"* actually may consist of three different factors (Cf. paragraph 1.3.3). Another motive group may be seen as consisting of *Accomplishment*, *Friends*, and *Culture*. A third alternative could be to view *Family* and *Friends* as subscales within a more general *Social* factor often employed in earlier research (Beard & Ragheb, 1983; Tinsley, 1984; Schmidhauser, 1989).

In spite of extensive and time-consuming analyses, however, our data have not given sufficient support to ambitious model constructions of this kind.

4.3 Method-related information

Firstly, large *demographic variation* in motive scores is evident throughout the five studies. Representative samples, therefore, are needed for this type of research. Also *sample size* in itself is important. Given the demands of SEM model testing and other multivariate analyses, rather large samples are required for analyzing the data. Our *National standardization* study (Study IV) intended to meet both requirements, by employing a sample that was large and representative at the same time (cf. paragraph 3.4.4.2).

The technical question of *increasing the number of scale steps* from four to five (cf. paragraph 3.2.4.2) apparently does not appear to be a problem. A 4-interval technique is employed in studies I and II, while a 5-interval technique was introduced for studies III, IV, and V. Apparently both versions perform well in practice. Since

most scales are adequately replicated across the different studies, the two scaling versions also produce comparable results.

Towards the end of sub-chapter 1.3.1, it was argued that the Norwegian term *"Ferie og fritid"* covers both vacation and leisure travel. This combined concept is in fact used in the question format of most of our five studies. In study II, however, the motive questions are limited to addressing *"…your vacation trip this summer"*. Could this discrepancy, then, be used for actually testing the assumption of the twin concept of *"Ferie og fritid"*?

There are indeed small, but statistically significant differences in the means of five out of eight scales in the two studies. But unfortunately, this question is confounded with the inland/coastal town difference between the samples. Minor scale revisions also complicate matters. Consequently, there is no way of knowing how much of the difference is attributable to:

1. asking about motives for "vacation" instead of "leisure",
2. differences between the inland and the coastal town, and
3. item replacements made in the measurement scales.

In view of the limited magnitude of these differences, therefore, a cautious conclusion appears to be warranted: The differences are probably too small to be important, and what causes them is not clear.

Yet another view of the leisure/vacation difference may be provided by the literature on attitude/behavior compatibility. A distinction is often made between *general* and *specific* attitudes, and general attitudes will predict general behavior types better than they predict more specific behaviors (Ajzen & Fishbein, 1980; Kraus, 1995; Eagly & Chaiken, 1993).

Figure 4 (next page), taken from a survey (Kleiven et al., 2002) not included in the present set of studies, may serve to illustrate this point. In a convenience sample

of Norwegians on domestic inland vacations, respondents were asked *"How important are these factors for your decision to come to this place?*[10]*"* With this focus on a specific destination for their present vacation, respondents scored substantially *lower* on all motive scales except *Nature* than what was found in our national survey. This suggests that most motive dimensions were significantly less important to inland domestic vacations than to leisure and vacations in general. Clearly, the reasons behind *one specific vacation* may differ from peoples' motives for vacation and leisure *in general*.

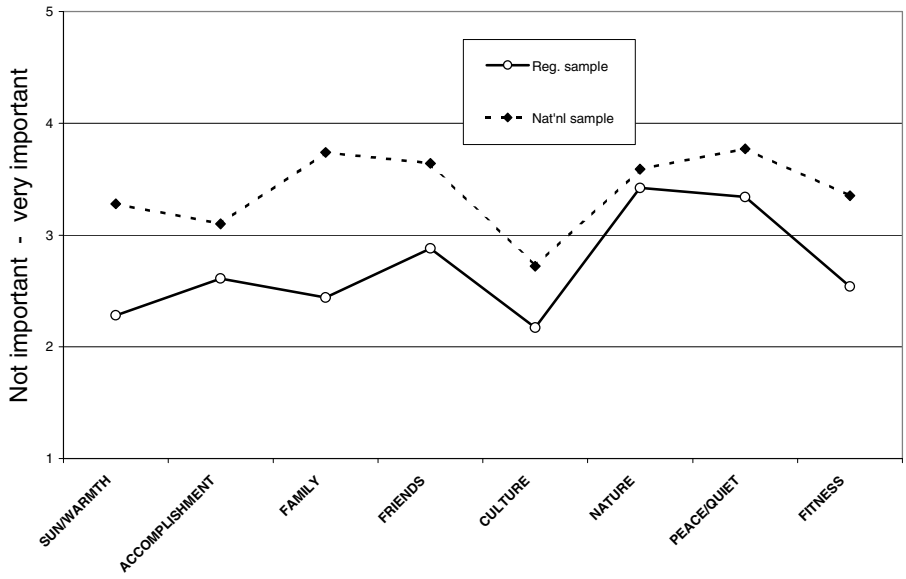

Figure 4. Scale means in National sample and in a survey of inland domestic vacationists (From Kleiven, Holmengen, & Rønningen, 2002).

[10] The communities of Elverum, Engerdal and Trysil, specifically.

Conceivably, the differences between our first and second studies could have been due to the "vacation" concept being more specific than "leisure". Compared to differences in figure 3, however, the slight discrepancies between our two studies are not impressive. It is tempting, therefore, to turn the argument around. If the distinction between asking for *vacation and leisure* motives and *vacation only* motives were important; rather more definite differences between the two studies would have been anticipated.

All in all, then, the five studies leave an impression of relatively robust motive scales, that are fairly stable across the minor changes that have been made for different reasons. Nonetheless, there is still room for scale improvement through item replacements.

The *"Friends"* scale may deserve particular attention. Here, *alpha* scores are too low too often, suggesting recurring problems with the internal consistency of the scale. The *"Indulgence"* scale fares even worse, clearly not performing at an acceptable level.

.

5. CONCLUSIONS and DISCUSSION

The five themes contained in this final chapter are closely interrelated. First, conclusions about the separate scales are presented. Then, our information on multivariate measurement models is evaluated, followed by a brief comment about central methodological issues. The substantial findings about Norwegian leisure and vacation motives are then summarized. Finally, five theoretical assumptions underlying the entire project are discussed.

5.1 Single scales

Eight separate motive scales look good in several respects. *Sun/warmth, accomplishment, family, friends, culture, nature* and *peace/quiet* all appear to be applicable and measurable concepts, as well as proving relevant to most people in the *general* samples. The scales also replicate well across several independent studies and across some variation in item selection and question format.

Also the basic psychometric characteristics of these eight scales do lend support to the dimensions implied. A ninth scale fares less well, however. *"Indulgence"* does not appear to perform at an acceptable level, and will be excluded from further discussion.

Reliability: In terms of Cronbach's *alpha*, most scales largely yield adequate values. The *"Friends"* scale, however, is an apparent exception. Here, *alpha* scores are generally too low, suggesting recurring problems with the internal consistency of the scale.

There is also some evidence that most scales are stable over time. The high test-retest reliabilities of Study 3 testify to the belief that the scales tap relatively *lasting and stable phenomena.*

All is not well, however. Confirmatory factor analyses of single scales show several imperfections in the measurement models, and further scale improvements through item replacement should certainly be considered.

Less importantly, the *parallel measures* model implied in simple summed-score scales fits the data less well than the *congeneric measures* model. A likely aim for further scale improvement, then, could be to bring scales closer to the *parallel measures* model by carefully adjusting and replacing individual items. In view of the extremely high correlations between these two scale versions, however, this hardly is a matter of much practical interest.

Validity: The data on scale validity looks promising, as the scales have been shown to possess some relevant predictive power. They also hold their own in the presence of other strong influences on behavior, representing separate and identifiable contributions to the prediction of leisure and vacation behavior.

These findings should certainly not be viewed as conclusive, however. More work is needed on the issues of validity and prediction. The main challenge may be interactions between motive variables and other prediction variables, as a number of examples suggest. If the predictive power of motive scales is in fact dependent on the state of other variables, more complex multivariate models will be needed for assessing scales' predictive power, as well as their concurrent and predictive or criterion validity.

Other scale properties: The data gathering technique has functioned well, and neither floor nor ceiling effects were present. The relative size of the scale means were rather consistent throughout the five studies, and the variations observed were meaningful.

All in all, then, the eight scales appear to have satisfactory measurement properties, and the set of scales provide an interesting basis for continued research into Norwegian leisure and vacation motives.

5.2 The combined multi-scale model and SEM contributions

A simple multidimensional model is implicit in our approach to motive measurement. Here, eight different latent motive variables are assumed, each being measured through four independent manifest variables (items). This simple model was generally not supported by our data, however.

Here, the general SEM approach has helped in pinpointing the differences between the model and the data covariance matrices. And, as Jöreskog (1993) has pointed out, model improvement and generation is perhaps the most common use of the SEM framework.

One of the reasons for the discrepancies between the *composite* models and the data is the measurement problems observed with some *individual* scales. When single-scale CFA has indicated that correlated error terms of items will improve the model, it points to a discrepancy that also contributes to the problems in the multi-dimensional model. Ideally, therefore, the measurement model for each individual scale should be improved as needed before it is added to the composite model. If correlated error terms is the preferred model change, however, the unidimensionality of the scale may be compromised.

Another contribution to the fit problems observed with the simple multi-dimensional models is that scale items commonly load on more than one factor. But this is rather reminiscent of what normally emerges from old-fashioned EFA (Exploratory Factor Analysis). When factors are extracted in EFA, one is hardly surprised to find that an item "belonging" to one factor also has a small (but significant) loading on another. Instead of viewing the items loading on several factors as a problem to our CFA, therefore, this constitutes a realistic and welcome amendment to the implicit measurement model.

In my view, neither correlated item error terms nor items loading on more than one factor imply major or unacceptable changes to the model. Acceptable fit is often

obtained through minor adjustments of this kind, however. This clearly suggests that such modifications should be applied to the basic model. The limited nature of the modifications, however, also indicates that even the simple, unmodified model is not terribly and basically misleading.

Also, it should be clear that composite models of this kind are extremely demanding. They imply very large degrees of freedom, and a large number of potential discrepancies may contribute to the differences between model and data. And, with large samples, the Chi-square test is probably overly sensitive to even minor problems (Hu & Bentler, 1995; Raykov & Marcoulides, 2000; Kline, 2005). In accordance with common advice in the SEM literature (Hoyle & Panter, 1995; Byrne, 2001; Kline, 2005), therefore, also other fit indices have been employed throughout the five studies.

Even with imperfect models, however, a number of points related to the multi-dimensional motive measurements have emerged.

- Firstly, the multi-motive approach is supported by or data: To most people in our samples, *more than one motive dimension is important*. This is, of course, consistent with current conceptions of travel and leisure motives (Krippendorf, 1987; Haukeland, 1993; Kleiven, 1998b; Kleiven, 1998a; Schmidhauser, 1989; Witt & Wright, 1992).
- Secondly, the eight motive dimensions do not fit an orthogonal measurement model with its assumption of uncorrelated scales. Our scales are correlated, and some of the correlations are quite high.
- Thirdly, scales' divergent validity appears not to be compromised by the high inter-scale correlations: The latent constructs behind the eight scales are distinct and separate. It is argued that the correlations observed are due to the co-occurrence of certain motives in some settings, and not to confounded concepts.

- Extensive efforts to identify second-order motive constructs have not been successful.

All in all, then, the eight-motive factor model is not without support. Most of the individual scales may be measured in an acceptable manner, and putting them together in a composite model does not invalidate the eight motive dimensions implied.

Promising as this model may appear, however, it is not offered as a final or definite answer to the question of Norwegian leisure and vacation motives. While the eight scales probably do measure motive dimensions that are relevant and important to the better part of the population, they in no way exclude the possible existence of other motive factors. Factor solutions are highly dependent on item choice: By adding or replacing motive items, other factors may well be identified.

Searching for motive factors, therefore, should not be viewed as an "objective" process within a natural sciences paradigm, simply discovering what exists "out there". In the initial phases of the project, e.g., great care was taken to avoid motives or wishes that were only found in a few individuals, and to construct or pick items that were related to motive themes selected from previous research. Later, items (and scales) that did not fit into this developing framework were deliberately removed. This procedure should not be taken as simply observing technical or practical considerations. Once the general idea of the eight (or nine) factors had emerged, we deliberately acted to improve the model, the factors, and the associated measurement techniques. Clearly, a constructive and creative process is involved, involving conscious decisions as well as considerations less available to cognition.

In our studies, motive dimensions have been selected and even created, not through naïvely discovering positively existing facts. Hence, ours is not the only 'solution' that may be empirically correct. In the longer run, therefore, the practical utility value of this specific 'model' will be central to its acceptance or rejection.

At any rate, the construction of the single-scale measurements as well as the eight-factor model has been guided by the facts available in our data sets. They are thus veridical in the simple sense of being largely consistent with the available data, fulfilling one important demand on scientific models. One of the great lessons learned from SEM, however, is that several different models may be compatible with the available data (Kline, 2005).

In the present context, therefore, no claim will be made that our eight-factor model is the only conceivable way of describing or understanding Norwegian vacation and leisure motives. It seems likely, however, that our measurement procedures are robust and work well, that the eight factors identified will deserve consideration in future research, and that they may prove useful to applied work in this field.

Alternative and additional dimensions may well exist, and some highly intercorrelated scales may perhaps be replaced by factors that are even more general. The most likely omissions are perhaps motive factors that are only relevant to special parts of the population, but are nevertheless quite important. The youthful wish for fast, risky and exciting experiences may be an example of this. Although not covered by our set of scales, there is every reason to believe that such a motive exists, and that measuring and understanding it may be useful to the tourism business. The "Indulgence" scale also may deserve further attention, perhaps separating it into several different dimensions. A likely candidate for inclusion here may be the venerable concept of "Conspicuous consumption" (Veblen, 1953), a phenomenon far more easily observable today than when this project was initiated.

5.3 Additional comments on method

A methodological problem raised in paragraph 3.5.4 may deserve special attention. In the fifth (predictive validity) study, there are similarities between the question format of certain motive scale items and some of the questions about activities. Most notably, the words "sunbathing" and "swim" were used in all four items belonging to the Sun/warmth *motive* scale; while the very same words also were used in three out of the six items in the *activity* scale of "*Traditional carter-sun activities*". Finding these two scales to be highly correlated is of course not surprising, and this correlation should be interpreted very cautiously.

This problem, unfortunately, is not limited to this specific study. Also more generally, certain behaviors are closely related to comfortable climatic conditions and Sun/warmth; and finding or constructing non-obvious activity concepts and measures is problematic. Realizing the risk of tautology, however, the use of the specific sun – swim link as an example of motive – behavior correspondence has been avoided.

It may be argued, of course, that this correspondence indicates that these *motive* and *activity* scales are simply tapping the very same latent variable. In the specific case of the fifth study this seems quite likely. To quote the paragraph mentioned above: *"… future research on leisure motives should avoid items with words that also relate to the very behavior that is to be predicted. If not, there is a danger of tautologies and self-evident correlations."*

There is more to this problem, however, than a simple methods effect of coinciding words. If these activity questions were replaced by simple observations, the prevalence (and perhaps duration) of swimming and sunbathing may still be highly correlated with the responses on the *sun/warmth* motive scale. But translating this into SEM terms, also observations of swimming may be interpreted as yet another handy manifest variable that may be used for measuring the *sun/warmth* motive. Using the *sun/warmth* motive to predict swimming, then, becomes pointless.

However, a similar, but different activity scale could be constructed by using the three remaining items of the "*Traditional carter-sun activities*" scale. Using items "*Visiting restaurants"*, "S*hopping"*, and *"Reading other literature"*; would result in a new summed scale that could perhaps be named "*Traditional urban charter activities*". Predicting scores on this scale from responses to the *sun/warmth* motive scale, then, would perhaps be less of a problem.

Motive scales, of course, should only be used for predicting classes or types of behavior that are logically independent of the manifest items of the latent variable factor. If not, predictions will hardly provide true empirical findings.

It should be kept in mind, however, that the focus of the present project is on identifying central motives or wishes. In this context, obvious motive – behavior links should hardly be taken to indicate that motives are unimportant. It should also not be viewed simply as a technical problem to the empirical assessment of the motive concept validity.

Perhaps a different conceptualization may be called for to accommodate some strong interrelations. If motive items (or operational definitions) and behavior types in fact do overlap strongly, it may suggest that a more comprehensive or unified concept is needed. Larger patterns, including behavior as well as motives and attitudes may well prove interesting to the field of leisure/vacation, often focusing on the identification of user groups, customers and market potential. And examples of this approach are indeed found in early American research. In an influential article, Hawes (1977) factor analyzed *"Activity-Interest-Opinion Statements"*, making no distinction between activity- and attitude-related items. Perreault, Darden & Darden (1977) also utilize *"Activity-Interest-Opinion Statements"*, including attitude items that are hardly distinguishable from motive and activity issues.

Similar, "combined" concepts have also been employed in European vacation and leisure research. Working on an *"European Vacation Style Typology"*, Zins (1997) describes it as *"…exploiting the advantage of the multivariate nature of*

combined motivational and behavioral patterns". In an early version of *Reisemarkt Schweiz* (Swiss Holiday Survey), Schmidhauser (1989) uses activity items with his motive factors. Avoiding the assumption that motives and behavior may be studied independently, this general approach may also be suitable for comprehending the Norwegian *Sun/warmth* cluster of behaviors and motives.

However, this approach is not likely to help our understanding of other motive-behavior complexes. In our studies, a one-to-one motive-behavior correspondence is rarely found. Rather, most motives are seen to influence several types of behavior, and most behaviors are influenced by more than one motive. Even in the predictive validity study, the "Traditional sun/warmth activities" are shown to be influenced by three different motives, not only by the problematic "Sun/warmth" motive. This challenging complexity of such patterns would hardly be appreciated by research taking larger, unified motive-behavior patterns for granted.

Another methodological question may be considered is a potential problem of cognitive consistency (Festinger, 1957; Eagly & Chaiken, 1993). Some time *after* their return, respondents in studies I and IV were asked to indicate the importance of motive items to their leisure and vacation that summer. In studies II and V, the same question was focused on vacation only. This post-fact approach, of course, leaves subjects free to adjust their motive responses to achieve some minimal balance with their actual experiences from that summer. To some extent, this may have happened.

In the third study (the stability check), however, motive scales were administered both before and after the leisure travel in question. The mean motive scores were rather similar in the "before" and "after" conditions, indicating that our travel motives are relatively robust and stable. If cognitive consistency processes had a strong influence, one would expect vacation experiences to have resulted in some change from the before to the after condition. The stability of the motive measures, then, does not support the idea that motive measures are greatly influenced by the preceding actual experiences.

Still, cognitive consistency problems in a more general sense may not be ruled out. Firstly, respondents may have remembered their pre-trip responses. Wishing to appear as consistent persons, they may then be reluctant to give different post-trip responses.

It may also be argued that since most Norwegians have become fairly seasoned travelers by now, their trips abroad are likely to simply confirm existing expectations. The great surprises – that will change peoples' views of what is important on a vacation – do not happen very often these days. And infrequent occurrences are not likely to alter the general motive scores much. Moreover, popular views on vacations abroad may be firmly entrenched, and thus fairly resistant to conflicting information (Eagly & Chaiken, 1993). All in all, then, the question of cognitive consistency may well deserve more attention in future research.

Throughout our set of studies, *representative samples* have proven to be another important consideration. Given the substantial demographic variation in scale scores, haphazard convenience samples imply a risk of getting misleading results. Representative surveys, therefore, are clearly needed for research into travel and leisure motives.

Our nationally representative study (Study IV), however, may increase the value of data from Norwegian convenience samples and special populations. The standards developed in the national study may be employed as a "yardstick", allowing comparisons between the standards and the results of non-representative studies and providing a basis for an improved interpretation of results. With accessible national standards, even apparently conflicting results may become interesting and comprehensible.

The *sample size* also proves important, partly due to the great demographic variation. Whether this variation is studied through SEM effect models or through breaking down the data by other multivariate methods, it requires complex analyses

that put great demands on the number of observations in the sample. In this context, the small samples of our two initial studies (I and II) definitely limit the analyses.

5.4 Norwegian leisure/travel motives: Initial substance

In spite of our clear focus on scale development, certain interesting facts about leisure and travel motives have emerged. The main substantial finding of our studies, of course, was shown by figure 2 (on page 61). *Peace/quiet* and *Family* are the most important motives for Norwegians' leisure and vacations, with *Nature* and *Friends* in close competition. *Fitness*, *Sun/swim*, *Accomplishment* and *Culture* are less important, but clearly valued and relevant to most people.

Clearly, this forms a portrait of a rather conservative population, with un-surprising, traditional views on the use of vacation and leisure time. Hence, the preferences found are readily recognized and understood by most Norwegians.

Parts of this picture still match the national stereotypes specifically developed as part of the ideological basis for the "new" kingdom of Norway around the beginning of the 20th century (Nansen, 1978; Nedrelid, 1992; 1994; Hompland, 1992; Richardson, 1994). But the motives probably also reflect a post-war period where steadily improving economic opportunities made a vast array of leisure and vacation choices available to most people (Mordal, 1979). Most people in this country are used to having time off work for relaxation, and often return to their original home community to visit family during vacations. They also have experienced private cabins and outdoor recreation with friends, either by the sea or inland. Commonly, they have also traveled to comfortable climates or culturally interesting destinations, most often on charter tours by air (Jacobsen, 2002; Statistisk sentralbyrå, 2007).

Accordingly, the emerging image of leisure and vacation motives contains no great surprises. It matches the stable, well-known leisure interests of large population

groups rather well. To some people, therefore, such findings may appear boring or unexciting, implying little that was not known in advance.

Instead of dismissing unsurprising findings as not interesting, however, their good match with common sense could be seen as suggesting external validity. If common knowledge is basically correct – as indirectly suggested by our respondents' good comprehension of their own motives – it may help safeguarding against possible misunderstandings and artifacts in research.

At any rate, closer looks at our data may bring out points that are not obvious. Firstly, the great demographic variation in motive scores is not only a methodological problem. It may also be counted among the most interesting *findings* from our surveys.

This comes through most clearly in study IV (the national standardization survey). Here, substantial *gender* differences were found, as well as regional differences. It also appears that people in different life stages have different motive patterns, clearly suggesting changing priorities throughout life's various phases. As previously noted, however, the intent of the reported studies has not been to provide substantial finding on motives, but to develop and test scales suitable for their measurement.

In closing, it is nonetheless rewarding to find that the scales already are being put to their proper use. The survey of domestic tourism to the inland of Eastern Norway (Kleiven et al., 2002) that has already been mentioned, showed *Nature* to be the only motive of some importance to these visitors. Scales have also been employed in a study of Spitzbergen Adventure Tourists (Andersen, 2003), discussing the findings in terms of Vroom's (1964) "expected outcomes". The study of Norwegian golfers previously referred to (Berg, 1998; Kleiven & Berg, 2003) showed *Accomplishment* to be the distinguishing motive of golfers, and used a MIMIC model to gauge the influence of motive and private economy on golf-related consumption. In

a visitor survey of the Lofoten islands (Viken, Akselsen, Evjemo, & Hansen, 2004), modest use was made of certain motive items.

Since 2007, Hans Holmengen and Rolf Akselsen have been using the scales in a nation-wide visitor survey, expected to continue into 2010 (Holmengen, 2008). Kleiven & Vorkinn (2004) has shown differences between several types of hiking by foot, by constructing MIMIC models including an "interest" variable along with motive measures and demographic data. Prebensen (2006) has used motive scales and items in several studies included in her doctoral thesis, some of which also are found within the present project. Her applied interest, of course, was directed towards travel and tourism marketing.

Last, but not least, the scales are being actively used in several Travel & Tourism courses at Lillehammer (Holmengen, 2008).

Of course, the proof of the pudding is in the eating; and only further use, testing and research will show whether the present set of scales has been worth the effort.

5.5 Theories and assumptions about motives

Several psychological perspectives on motives form the basis of the present research, as was hopefully made clear in the introduction. Although neither perspectives nor models of motivation have been put to formal tests, our results may be relevant to a less stringent assessment of five theoretical points.

First, there is a focus on *cognitively available motives* as a basis for *rational decisions and plans*. That implies assuming that there commonly are reasons behind what people do, and that humans may consciously plan behavior to obtain desired effects. When people choose what to do, their selection of actions is often guided by the results expected. Parts of this selection process are present in our conscious mind, forming thoughts and deliberations about how to get what we want. These beliefs obviously constitute a common thread in several different theoretical approaches. Our

basic question format (*"How important was…"*) obviously takes this belief for granted.

It is no surprise, then, that our results generally match this line of thought. The respondents generally do not find it difficult to indicate the importance of wishes or goals to their vacation and leisure behaviors. And, when the responses are grouped into a number of more abstract 'motive' scales, these scales predict the relevant choices and actions fairly well. Clearly, the data are consistent with the basic assumption of rational, planning man with cognitive access to his own motives. It is still worth noting, however, that results could in fact have been different. If, e.g., people had proved unable to answer questions about their vacation/leisure wishes and goals, or no relationship between their motives and their leisure behaviour had been observed; then the data would not have been consistent with our initial assumptions.

Second, it has been taken for granted that *more than one motive* is in operation for most people. Consequently, our methods were not limited to search for the respondent's one most important theme or for sociological "ideal types" (Cf. Aubert, 1969; Cohen, 1972; Plog, 1987), but could develop a multidimensional picture. Of course, this may again be a straightforward case of self-fulfilling expectations, clearly finding what you are looking for. Nonetheless, data could – in principle – have painted a one-dimensional picture for certain groups, indicating that, e.g., *Family* is the only thing that matters to young parents or that *Peace & Quiet* is the one and only consideration when elderly people plan their leisure. As we have seen, however, this is clearly not so in our material.

Third, the notion of *domain-specific* motives has been adopted. Instead of initially focusing on motives expected to be *generally* important to human behaviour, we looked for motives that were *specifically* relevant to leisure and vacation. Nonetheless, the emerging results appear to include also motives that are central in other parts of peoples' lives. While, e.g., *Sun/warmth* and *Nature* may come close to being predominantly concerns for leisure; *Family*, *Friends* and *Accomplishment* may be more generally applicable across more domains of life. The basic idea of *domain*

specificity, therefore, appears not to have excluded some more *general* motives from our view.

Four, the existence of some central motives that most people can relate to has been assumed. In the initial phases of our research, therefore, the focus was on common and broadly applicable wishes and goals, while information that appeared highly personal or idiosyncratic was viewed as less interesting. It is worth noting, therefore, that other motives probably exist: Our simple motive model is incomplete at best.

The most obvious example may be that some minority groups may have deviant leisure habits and wishes. But also unconscious (or non-conscious) motives will influence behavior, and intrinsic motivation is yet another interesting challenge. And perhaps some future research will attempt to cover non-conscious and intrinsic motives in addition to conscious motives and decisions. This could well mean an improvement on the present project, which has collected information only on the cognitively available. In research based on extended models, then, the relative importance of conscious, non-conscious and intrinsic motives may be turned into an empirical question – actually testing central but not proven assumptions.

Until such ambitious research has been carried out, however, our limited model should be recognized as a fair approximation to Norwegian leisure and vacation motives. Our eight motives have been shown to be important to most people, and are supported by several independent data sets. It thus clearly represents a step forward in our efforts to understand Norwegian vacation and leisure. Hopefully, however, it will later be supported by well-researched motive models of larger scope and even greater complexity.

Fifth, motives are but one of several influences on vacation and leisure behavior. Consequently, the basic motive → behavior model needs to be supplemented by a number of covariates. Other influences are also important to behavior, and have to be taken into consideration when attempting to understand the power of

motives. As has been indicated earlier, demographics and basic personality differences may play a part. But constraints and barriers to leisure may prove even more decisive, as shown by Wade (1985) and by Goodale & Witt (1989). Theories assuming Dual Process (Chaiken & Trope, 1999) and Bounded Rationality (Tversky & Kahnemann, 1981) are likely to be examples of the complex cognition models needed.

To sum up, the most central relationships between our research and relevant theory are:

1. Our research is built on the basic premise that people have cognitive access to their own wishes and goals in leisure and vacations, making conscious decisions about their behavior.
2. It is also assumed that several motives may be operating simultaneously, expecting a multidimensional approach to be relevant.
3. Motives are expected to be specific to the domain of leisure and vacation, discouraging a search for motives that would be generally relevant to all parts of life.
4. We assume that some common motives exist, and that they are important to most people. This implies a focus on larger groups in the population and their leisure goals, however, probably implying limited sensitivity to smaller groups and deviant behavior. No claim is made, therefore, that our list of motives is exhaustive.
5. Not only motives influence vacation and leisure behavior. Other influences are also important, and complex models are needed to understand the relationships involved.

As indicated above, these five points have been built into our entire research process as unquestioned premises, obviously carrying the risk of self-fulfilling prophecies (Rosenthal & Rubin, 1978). They thus form assumptions that have not been formally

tested in our research. Nonetheless, our project may shed light on these five assumptions.

As already indicated in the discussion of the first point, data are indeed consistent with the basic assumption of rational, planning man, consciously planning his behavior in accordance with his own goals and wishes. Our respondents had clear ideas about their wishes and goals for vacation and leisure, were able to think and talk about them, and interesting correlations emerged between their motive responses and their behaviour. Since results actually could have been different, they may be viewed as supporting the assumptions of rationality and cognitive availability, however indirectly.

As for the second point, results clearly support the multidimensional approach to motives. Several motives are relevant to most people, and factor models clearly indicate sufficient divergent validity between most scales.

The expectation of domain specificity obtained perhaps less convincing support. While some scales appear to 'belong' only in the vacation/leisure domain, others are clearly applicable also outside this domain. Fortunately, our procedures have not prevented the 'general', less specific motives from appearing.

The fourth assumption of motives that will be common to large parts of the population also is consistent with our data. It should be recognized, however, that our methodological approach probably is insensitive to small groups and their special motives. There are a limited number of young people, e.g., that take great pleasure in challenging, risk-taking behavior like base jumping. The adrenaline 'kicks' associated with physical risk does not appear in our representative population studies, since this 'motive' only is important to a small group of people. Minorities and their particular behavior may still be highly visible in the media, however.

The fifth assumption was actually not clearly recognized at the beginning of the project. Rather, it gradually emerged as an insight during the first attempts to analyze the motive scale data for evidence of validity. By including other variables in

regressions and SEM procedures to form multivariate models, the impact of motives on behavior would sometimes be enhanced, sometimes attenuated. In either case, it is clear that the influence of motives should be studied within larger, complex effect models. Factors like personality differences, cognitive limitations and external constraints to behavior may serve as examples of variables likely to deserve attention in this context.

All in all, then, the assumptions underlying our project have not fared badly. They are largely consistent with the data produced, and also do not offend common sense. But again, our project has made no attempt to test them. In the absence of formal testing, however, we are pleased not to have observed any unexpected problems anywhere in the research process. If there had been serious flaws in the untested premises underlying this research, something certainly would have emerged.

5.6 Final personal note

It may be proper, therefore, to end with a personal note. I do realize that hunches and guesses made at the beginning of extensive research processes frequently prove wrong. Since no major catastrophe of this kind has emerged in our project, it may be time to count a few blessings.

The project also has been personally rewarding in some ways, and I am personally quite pleased with the results obtained. I do not mind admitting, however, that my initial interest in travel and leisure motives has been somewhat attenuated over the last few years. Turning my attention elsewhere now feels quite appropriate.

6. References

Ajzen, I. (1991). The Theory of Planned Behavior. *Organizational Behavior and Human Decision Processes, 50*, 179-211.

Ajzen, I., & Fishbein, M. (1980). *Understanding attitudes and predicting social behavior*. Englewood Cliffs, New Jersey, USA: Prentice Hall.

Andersen, S. (2003). *Sammenhengen mellom naturvennlige holdninger og intensjon til naturaktivitet blant gjester på Svalbard [The relationship between nature-friendly attitudes and intentions of nature-based activities among visitors to Spitsbergen]*. Unpublished master's dissertation [hovedfagsoppgave], NTNU, Trondheim.

Arbuckle, J. L. (1997). *Amos Users' Guide Version 3.6*. Chicago: SmallWaters Corporation.

Asbjørnsen, N., Fjelde, N., Hult, S. R., Kværk, A., & Pedersen, J. (1994). *Gallup Kompass - Forbruker & Media '93. Dokumentasjon.* Oslo: Norsk Gallup A/S.

Aubert, W. (1969). *Det skjulte samfunn [The Hidden Society]*. Oslo: Pax forlag.

Atkinson, J. W. (1964). *An Introduction to Motivation*. Princeton, New Jersey: Van Nostrand.

Atkinson, R. L., Atkinson, R. C., Smith, E. E., Bem, D. J., & Nolen-Hoeksema, S. (2003). *Hilgard's Introduction to Psychology*. New York: Harcourt, Brace & Company.

Beard, J. G., & Ragheb, M. G. (1983). Measuring Leisure Motivation. *Journal of Leisure Research, 15*(3), 219-228.

Bentler, P. M., & Wu, J. C. E. (1993). *EQS/Windows user's guide*. Los Angeles: BMDP Statistical Software.

Berg, S. (1998). *Markedsundersøkelse av norske golfspillere generelt, og deres motiver for å dra på golftur til utlandet [A General Market Survey of Norwegian Golfers, with a Focus on Their Motives for Golfing Trips Abroad]*. Unpublished bachelor dissertation, Lillehammer College, Travel and Tourism Course.

Broadbent, D. E. (1958). *Perception and Communication*. London: Pergamon Press.

Byrne, B. M. (2001). *Structural Equation Modeling With AMOS: Basic Concepts, Applications, and Programming*. Mahwah, New Jersey, USA: Lawrence Erlbaum Associates.

Cha, S., McCleary, K. W., & Uysal, M. (1995). Travel Motivations of Japanese Overseas Travelers: A Factor-Cluster Segmentation Apporach. *Journal of Travel Research,* 33-39.

Chaiken, S., & Trope, Y. (1999). *Dual-Process Theories in Social Psychology*. New York: The Guilford Press.

Crandall, R. (1980). Motivations for Leisure. *Journal of Leisure Research, 12*(1), 45-55.

Cohen, E. (1972). Towards a Sociology of International Tourism. *Social Research*, *39*, 164-182.

Crawford, D. W., Godbey, G., & Crouter, A. C. (1986). The Stability of Leisure Preferences. *Journal of Leisure Research, 18*(2), 96-115.

Crompton, J. (1979). Motivations for pleasure vacation. *Annals of Tourism Research, 6*(4), 408-424.

Csikszentimihalyi, M. (1975). *Beyond Boredom and Anxiety*. San Franscisco: Jossey-Bass.

Dann, G. (1977). Anomie, ego-enhancement and tourism. *Annals of Tourism Research, 4*, 184-94.

Dann, G. (1981). Tourism motivation: An appraisal. *Annals of Tourism Research, 8*(2), 187-219.

Deci, E. L., & Ryan, R. M. (1987). The support of autonomy and the control of behavior. *Journal of Personality and Social Psychology, 53*, 1024-1037.

DeVellis, R. F. (1991). *Scale Development. Theory and Applications*. Newbury Park, California: Sage.

Driver, B. L. (1977). Item Pool for Scales Designed to Quantify the Psychological Outcomes Desired and Expected from Recreation Participation (Unpublished paper).

Driver, B. L., Brown, P. J., & Peterson, G. L. (1991). *Benefits of Leisure*. State College, Pennsylvania: Venture Publishing.

Driver, B. L., Nash, R., & Haas, G. E. (1987). Wilderness benefits: A state-of-knowledge review. I *Proceedings, National Wilderness Research Conference: Issues, state of knowledge, future directions* (pp. 294-319). Ogden, Utah: USDA Forest Service, Intermountain Forest and Range Experiment Station.

Driver, B. L., Tinsley, H. A., & Manfredo, M. J. (1991). The Paragraphs about Leisure and Recreation Experience Preference Scales: Results from Two Inventories Designed to Assess the Breadth of the Perceived Psychological Benefits of Leisure. In: B. L. Driver, P. J. Brown, & G. L. Peterson (Eds.), *Benefits of Leisure* (pp. 263-286). State College, Pennsylvania: Venture Publishing.

Duda, J. L., Chi, L., Newton, M. L., Walling, M. D., & Catley, D. (1995). Task and ego orientation and intrinsic motivation in sport. *International Journal of Sport Psychology, 26*, 40-63.

Eagly, A. H., & Chaiken, S. (1993). *The Psychology of Attitudes*. Orlando, Florida: Harcourt Brace Jovanovich.

Edwards, J. R., & Bagozzi, R. P. (2000). On the Nature and Direction of Relationships Between Constructs and Measures. *Pychological Methods, 5*(2), 155-174.

Festinger, L. (1957). *A theory of cognitive dissonance*. Stanford, California: Stanford University Press.

Figler, M. H., Weinstein, A. R., Sollers, J. J. I., & Devan, B. D. (1992). Pleasure travel (tourist) motivation: A factor analytic approach. *Bulletin of the Psychonomic Society, 30*(2), 113-116.

Fiske, S. T., & Taylor, S. E. (1991). *Social Cognition*. New York: McGraw-Hill.

Freud, S. (1960). The Psychopathology of Everyday Life. In J. Strachey (Ed. and Trans.), *The standard edition* . London: Hogarth Press.

Geen, R. G. (1995). *Human Motivation: A Social Psychological Approach*. Pacific Grove, California: Brooks/Cole.

Gitelson, R., & Kerstetter, D. (1990). The Relationship Between Sociodemographic Variables, Benefits Sought and Subsequent Vacation Behavior: A Case Study. *Journal of Travel Research, 18*(3), 24-29.

Goodale, T. L., & Witt, P. A. (1989). Recreation non-participation and barriers to leisure. In E. L. Jackson, & T. L. Burton (Eds.), *Understanding Leisure and Recreation: Mapping the Past, Charting the Future* (pp. 421-449). State College, Pennsylvania: Venture Publishing, Inc.

Gray, H. P. (1970). *International travel - International trade.* Lexington, Massachusetts: Heath Lexington.

Hackman, J. R., & Oldham, G. R. (1975). Development of the Job Diagnostic Survey. *Journal of Applied Psychology, 60*, 159-170.

Harrill, R., & Potts, T. D. (2002). Social Psychological Theories of Tourist Motivation: Exploration, Debate, and Transition. *Tourism Analysis, 7*, 105-114.

Haukeland, J. V. (1990). Non-travelers: the flip side of motivation. *Annals of Tourism Research, 17*, 172-184.

Haukeland, J. V. (1992). Motives for Holiday Travel. *Revue De Tourisme, 2*, 14-17.

Haukeland, J. V. (1993). *Den norske feriedrømmen [The Norwegian Vacation Dream]*. (TØI rapport 194). Oslo: Transportøkonomisk institutt.

Haukeland, J. V. (1996). Motivational Structures for Summer Holiday Trips. In: W. Framke, A. Hjalager, K. T. Pedersen, & P. Strunge, (Eds.), *Nordisk turisme i en global sammenheng. Udvalgte papers fra det 4. Nordiske Forskersymposium.* Copenhagen: Handelshøjskolen i København.

Haukeland, J. V., Nymoen, M., & Rideng, A. (1991). *Ferieundersøkelsen 1991 [The Vacation Survey 1991]*. (TØI rapport 105/91). Oslo: Transportøkonomisk institutt.

Hawes, D. (1977). Psychographics Are Meaningful - Not Merely Interesting. *Journal of Travel Research, 4*, 1-9.

Holmengen, H. (2008). Personal communication, 15.09.08.

Hompland, A. (1992). Friluftsliv – kva skal vi med det? [Outdoor recreation – what's the use of that?]. In T. Hage (Ed.), *Fra ide til aktivitet [From Idea to Activity]*. Trondheim: The Directorate of Nature Management.

Hornby, A. S., Gatenby, E. V., & Wakefield, H. (1963). *The Advanced Learner's Dictionary of Current English*. London: Oxford University Press.

Hoyle, R. H., & Panter, A. T. (1995). Writing About Structural Equation Models. In R. H. Hoyle (Ed.), *Structural Equation Modeling. Concepts, Issues, and Applications* (pp. 158-176). Thousand Oaks, California: SAGE Publications.

Hu, L., & Bentler, P. M. (1995). Evaluating Model Fit. I: R. H. Hoyle (Red.), *Structural Equation Modeling. Concepts, Issues, and Applications* (pp. 76-99). Thousand Oaks, California: SAGE Publications.

Hull, C. L. (1943). *Principles of Behavior*. New York: Appleton Century.

Iso-Ahola, S. (1989). Motivation for Leisure. In E. L. Jackson, & T. L. Burton (Eds.), *Understanding Leisure and Recreation: Mapping the Past, Charting the Future* . State College, Pennsylvania: Venture Publishing.

Jacobsen, J. K. S. (2002). Tilbakeblikk på turismen [Looking back on tourism]. In J. K. S. Jacobsen & A. Viken (Eds.), *Turisme: Fenomen og næring [Tourism: Phenomenon and Enterprise]*. Oslo: Gyldendal norsk forlag.

Jamal, T., & Lee, J.-H. (2003). Integrating Micro and Macro Approaches to Tourist Motivations: Toward an Interdisciplinary Theory. *Tourism Analysis, 8*, 47-59.

Jamrozy, U., & Uysal, M. (1994). Travel Motivation Variations of Overseas German Visitors. *Journal of International Consumer Marketing,* (3/4), 135-160.

Jöreskog, K. G. (1993). Testing Structural Equation Models. I: K. A. Bollen, & J. Scott Long (Red.), *Testing Structural Equation Models* (pp. 294-316). Newbury Park, California: Sage Publications.

Jöreskog, K. G., & Sörbom, D. (1993). *LISREL 8 User's Reference Guide*. Chicago: Scientific Software International.

Kleiven, J. (1994). Hvorfor går nordmenn tur i skog og mark? [Why do Norwegians take walks in nature?] In: *Friluftsliv: Effekter og goder.* (pp. 92-106). Trondheim: Direktoratet for naturforvaltning.

Kleiven, J. (1998a). *En vanskelig forenkling - den komplekse norske feriedrømmen [A problematic simplification – the complex Norwegian Vacation Dream]*. (Report no. 34/1998). Lillehammer: Lillehammer College.

Kleiven, J. (1998b). *Skalaer for måling av aktivitets- og motivmønstre i en norsk lokalbefolknings ferie og fritid [Scales for measuring activity and motive patterns in the vacation and leisure of a Norwegian local population]*. (Working paper no. 77/1998). Lillehammer: Lillehammer College.

Kleiven, J. (1999). The Lillehammer Scales: Eight Dimensions of Leisure and Travel Motivation (Abstract). In *Konferensrapport 7:e Nordiska Forskarsymposiet i Turism 1998.* Östersund: ETOUR.

Kleiven, J. (2000). Leisure Motives as Predictors of Activities: The Lillehammer Scales in a National Survey. In J. Ruddy, & S. Flanagan (Eds.), *Tourism Destination Marketing: Gaining the Competitive Edge* (pp. 65-73). Dublin: Tourism Research Centre, Dublin Institute of Technology.

Kleiven, J. (2001). *Praktisk bruk av Lillehammer-skalaene [Using the Lillehammer Scales in Practice].* (Working paper no.121/2001). Lillehammer: Høgskolen i Lillehammer [Lillehammer University College].

Kleiven, J. (2005). Measuring Leisure and Travel Motives in Norway – Replicating and Supplementing the Leisure Motivation Scales . *Tourism Analysis, 10*(2), 109-122.

Kleiven, J. (2006). *Eight Scales for Leisure Travel Research -- Replicating and Revising the Lillehammer Scales* [Research Report 131/2006). Lillehammer: Lillehammer University College.

Kleiven, J., & Berg, S. (2003). *Golf interest, general motives and demographics: Predicting the golf-related spending of male Norwegian golfers.* (Working paper 153/2003). Lillehammer: Lillehammer University College.

Kleiven, J., Holmengen, H., & Jacobsen, J. K. (1991). *Solturisten V: En sammenligning av vinterturister til fire sydlige reisemål [The Sun Tourist V: A comparison of winter tourists to four Southern destinations* . (Skriftserien 73). Lillehammer: Institutt for reiseliv, Oppland distrikshøgskole.

Kleiven, J., Holmengen, H., & Rønningen, M. (2002). *Norwegian tourists' motives for inland summer vacations (Paper given at the 10th Nordic Tourism Research Symposium, October 18-20, 2001 in Wasa, Finland).* (Working paper 135/2002). Lillehammer: Lillehammer University College.

Kleiven, J., & Thrane, C. (1994). *Reiselivsundersøkelsen i Gjøvik 1994 – en metoderapport [The Travel and Tourism Survey in Gjøvik 1994 – a methods report].* (Working paper no. 28). Lillehammer: Lillehammer College.

Kleiven, J., & Thrane, C. (1996). *Reiselivsundersøkelsen i Sandefjord 1995 - en metoderapport [The Travel and Tourism Survey in Sandefjor 1995 – a methods report.* (Working paper no. 16). Lillehammer: Lillehammer College.

Kleiven, J., & Vorkinn, M. (2004). Turformer, interesse og deltakelse -- motiver og andre pĺvirkninger pĺ norsk friluftsliv [Tour types, interest and participation -- motives and other influences on Norwegian outdoor recreation]. Paper given at *The 6th Conference on Social and Community Psychology* Trondheim: NTNU.

Kline, R. B. (1998). *Principles and Practice of Structural Equation Modeling*. New York: The Guilford Press.

Kline, R. B. (2005). *Principles and Practice of Structural Equation Modeling (2nd. ed.)*. New York: The Guilford Press.

Kline, R. B. (2006). Reverse Arrow Dynamics: Formative Measurement and Feedback Loops. In G. R. Hancock, & R. O. Mueller (Eds.), *Structural Equation Modeling: A Second Course* (pp. 43-68). Greenwich, Connecticut: Information Age Publishing.

Kraus, S. J. (1995). Attitudes and the prediction of behavior. A meta-analysis of the empirical literature. *Psychological Bulletin, 21*, 58-75.

Krippendorf, J. (1987). *The Holiday Makers*. London: Heinemann.

Lewis-Beck, M. S. (1994). *Basic Measurement*. London: SAGE.

Likert, R. (1932). A technique for the measurement of attitudes. *Archives of Psychology, 22*(no. 140), 44-53.

Lounsbury, J. W., & Franz, C. P. G. (1990). Vacation Discrepancy: A Leisure Motivation Approach. *Psychological Reports, 66*, 699-702.

Lounsbury, J. W., & Hoopes, L. L. (1988). Five-Year Stability of Leisure Activity and Motivation Factors. *Journal of Leisure Research, 20*(2), 118-134.

MacCannell, D. (1976). *The Tourist: A New Theory of the Leisure Class*. London: Macmillan.

Mannell, R. C., & Iso-Ahola, S. E. (1987). Psychological Nature of Leisure and Tourism Experience. *Annals of Tourism Research, 14*(3), 314-331.

Mannell, R., Zuzanek, J., & Larson, R. (1988). Leisure states and 'flow' experiences: testing perceived freedom and intrinsic motivation hypotheses. *Journal of Leisure Studies, 20*(4), 289-304.

Mayer, J. D., Faber, M. A., & Xu, X. (2007). Seventy-five years of motivation measures (1930-2005): A descriptive analysis. *Motivation & Emotion , 31*, 83-103.

Mayo, E., & Jarvis, L. (1981). *The Psychology of Leisure Travel: Effective Marketing and Selling of Travel Services* . Boston: Cabe Publishing.

Miller, G. A. (1956). The Magical Number Seven, Plus Minus Two: Some Limits on Our Capacity for Processing Information. *Psychological Review, 63*, 81-97.

Miller, G. A., Galanter, E., & Pribram, K. H. (1960). *Plans and the Structure of Behavior*. New York: Henry Holt & Co.

Mordal, T. L. (1979). *Nordmenns feriereiser [Holiday Trips by Norwegians]*. Oslo: Central Bureau of Statistics of Norway.

Murphy, K. R., & Davidshofer, C. O. (1994). *Psychological Testing. Principles and Applications (Third ed.).* Englewood Cliffs, New Jersey: Prentice-Hall.

Murray, H. (1943). *Thematic Aperception Test Manual*. Cambridge, Massachusetts: Harvard University Press.

Muthén, L. K., & Muthén, B. O. (2006). *Mplus: Statistical Analysis With Latent Variables (Version 4.1)*. Los Angeles: Muthén & Muthén.

Nansen, F. (1978). Friluftsliv, tale fra 1921 [Outdoor recreation, speech given in 1921]. In G. Breivik, & H. Løvmo (Eds.), *Friluftsliv fra Fridtjof Nansen til våre dager*. Oslo: Universitetsforlaget.

Nedrelid, T. (1992). Friluftslivet og vår nasjonale selvforståelse [Outdoor recreation and our national self-image]. *Nytt norsk tidsskrift*, (3), 281-288.

Nedrelid, T. (1994). Friluftslivet som kulturelt fenomen [Outdoor recreation as a cultural phenomenon]. In Direktoratet for naturforvaltning (Ed.), *Friluftsliv: Effekter og goder. Referat fra en forskningskonferanse* (DN-notat no. 1994-7). Trondheim: The Directorate of Nature Management.

Nunnally, J. C., & Bernstein, I. H. (1994). *Psychometric Theory*. New York: McGraw-Hill.

Pearce, D. (1989). *Tourist Development (second edition)*. Harlow, UK: Longman Scientific & Technical.

Pearce, P. L. (1995). Pleasure Travel Motivation . In R. W. McIntosh, C. R. Goeldner, & J. R. B. Ritchie (Eds.), *Tourism: principles, practices, philosophies* 7 ed., (pp. 167-190). New York: John Wiley & Sons.

Pearce, P. L., Morrison, A. M., & Rutledge, J. L. (1998). *Tourism: Bridges Across Continents*. Sydney: McGraw-Hill.

Pearce, P. (1988). *The Ulysses Factor: Evaluating Visitors in Tourist Settings*. New York: Springer.

Pedhazur, E. J., & Schmelkin, L. P. (1991). *Measurement, Design, and Analysis*. New Jersey: Erlbaum.

Perreault, W. D., Darden, D. K., & Darden, W. R. (1977). A Psychographic Classification of Vacation Life Styles. *Journal of Leisure Research, 9*(3), 208-224.

Pintrich, P. R., Smith, D., Garcia, T., & McKeachie, W. (1993). Reliability and predictive validity of the Motivated Strategies for Learning Questionnaire (MSLQ). *Educational and Psychological Measurement, 53*, 801-813.

Plog, S. (1977). Why destinations rise and fall in popularity. In E. M. Kelly (Ed.), *Domestic and International Tourism* . Wellesley, Massachusetts: Institute of Certified Travel Agents.

Plog, S. (1987). Understanding psychographics in tourism research. I: J. R. B. Richie, & C. R. Goeldner (Red.), *Travel, Tourism, and Hospitality Research. A Handbook for Managers and Researchers* (pp. 203-213). New York: John Wiley & Sons.

Porter, L. W., & Lawler, E. (1968). *Managerial Attitudes and Performance*. Homewood, Illinois: Dorsey.

Prebensen, N. K., & Kleiven, J. (2006a). Determined Sun-Seekers and Others — Travel Motives, Holiday Type, and Holiday Behavior Among Norwegian Charter Tourists . *Journal of Hospitality and Leisure Marketing, 14*(1), 75-97.

Prebensen, N. K., & Kleiven, J. (2006b). Stability in Outbound Travel Motivation: A Norwegian Example. *Tourism Analysis, 10*(3), 233-245.

Prebensen, N. K. (2006). *A grammar of motives for understanding individual tourist behaviour*. Unpublished doctoral dissertation, Norwegian School of Economics and Business Administration (NHH), Bergen.

Raykov, T., & Marcoulides, G. A. (2000). *A First Course in Structural Equation Modeling*. Mahwah, New Jersey: Lawrence Erlbaum Associates.

Richardson, H. (1994). *Kraftanstrengelse og ensomhet. En analyse av det norske friluftslivets kulturelle konstruksjoner [Physical efforts and solitude. An analysis of the cultural constructions of Norwegian outdoor recreation]*. Master's thesis in ethnology. Bergen: University of Bergen.

Rosenthal, R., & Rubin, R. B. (1978) Interpersonal expectancy effects: The first 345 studies. *Behavioral and Brain Sciences*, *1*, 377-415.

Rotter, J. B. (1954). *Social Learning and Clinical Psychology*. Englewood Cliffs, New Jersey: Prentice-Hall.

Ryan, C. (1993). Correlations between clusters based on the Ragheb and Beard Leisure Motivation Scale and the attributes of desired holiday locations. In: *Proceedings of Third International Conference of the Leisure Studies Association* UK: Loughborough University.

Ryan, C. (1994a). Leisure and tourism - the application of leisure concepts to tourist behavior - a proposed model. In: A. V. Seaton (Ed.), *Tourism: The State of the Art* (pp. 294-307). Chichester: John Wiley & Sons.

Ryan, C. (1994b). *Researching Tourist Satisfaction*. London/New York: Routledge.

Ryan, C. (1997). Similar Motivations - Diverse Behaviours. In C. Ryan (Ed.), *The Tourist Experience* (pp. 25-47). London: Cassell.

Schiffman, L. G., & Kanuk, L. L. (1991). *Consumer Behavior (4th ed.)*. Englewood Cliffs, New Jersey: Prentice-Hall.

Schmidhauser, H. (1989). Tourist needs and motivation. In: S. F. Witt, & L. Moutinho (Eds.), *Tourism Marketing and Management* (pp. 569-572). Hemel Hempstead, Great Britain: Prentice-Hall.

SEMNET. (2007) *The Structural Equation Modeling Discussion Network* [Web Page]. URL http://www2.gsu.edu/~mkteer/semnet.html [2007, June 20].

Simon, H. (1955). A Behavioral Model of Rational Choice. *Quartely Journal of Economics, 69*(1), 99-118.

Slovic, P., Fischoff, B., & Lichtenstein, S. (1977). Behavior Decision Theory. *Annual Review of Psychology, 28*, 1-39.

Stahl, M. J., & Harrell, A. M. (1981). Effort Decisions with Behavioral Decision Theory. *Organizational Behavior and Human Performance, 27*, 303-325.

Statistisk sentralbyrå (2007). *Ferieundersøkelsen 2005 [The Vacation Survey 2005]* (Norges offisielle statistikk D 365). Oslo: Statistics Norway.

Teigum, H. M. (1996). *Prosjekt: Samordnet levekårsundersøkelse 1996 - tverrsnittsundersøkelsen. Dokumentasjonsrapport [Project: Omnibus survey of living conditions 1996 – the cross-sectional survey.* (Notater 63). Oslo: Statistics Norway.

Thornton, P. R., Shaw, G., & Williams, A. M. (1997). Tourist group holiday decision-making and behaviour: the influence of children. *Tourism Management, 18*(5), 287-297.

Thrane, C. (1995). *De ikke-reisende om sommeren - hvem er de? [The non-travelers in summer – who are they?]* (Working paper no. 4/1995). Lillehammer: Lillehammer College.

Thrane, C. (1996). *Motivsegmenter i norsk sommerturisme - analysert ved korrespondanseanalyse [Motive segments in Norwegian summer tourism – analyzed by correspondence analysis.* (Research report no. 5). Lillehammer: Lillehammer College.

Tinsley, H. E. A. (1984). The psychological benefits of leisure counseling. *Society and Leisure, 7*, 125-140.

Tinsley, H. E. A., & Kass, R. A. (1979). The Latent Structure of the Need Satisfying Properties of Leisure Activities. *Journal of Leisure Research, 11*(4), 278-291.

Tolman, E. C. (1932). *Purposive Behavior in Animals and Men*. New York: Appleton.

Tran, X., & Ralston, L. (2005). Tourist Preferences: Influence of Unconscious Needs. *Annals of Tourism Research, 33*(2), 424-441.

Tversky, A., & Kahnemann, D. (1981). The framing of decisions and the psychology of choice. *Science, 211* (4481), 453-458.

Veblen, T. (1953). *The Theory of the Leisure Class (2nd. Ed.)*. New York: New American Library.

Viken, A., Akselsen, S., Evjemo, B., & Hansen, A. A. (2004). *Lofotundersøkelsen 2004 [The Lofoten Survey 2004].* (Telenor FoU Report 27/2004). Harstad: Telenor.

Vorkinn, M., Aas, Ø., & Kleiven, J. (1996). *Friluftsutøvelse blant den voksne befolkningen - utviklingstrekk og status i 1996 [Outdoor recreation in the adult population – development and status in 1996]* . (ØF-rapport no. 07/1997). Lillehammer: Eastern Norway Research Institute.

Vroom, V. H. (1964). *Work and Motivation*. New York: Wiley.

Vaagbø, O. (1993). *Den norske turkulturen [The Norwegian Culture of Walks]*. Oslo: Friluftslivets fellesorganisasjon.

Wade, M. G. (1985). *Constraints on Leisure*. Springfield, Illinois: Charles C. Thomas.

Wahab, S. (1975). *Wahab on tourism management*. London: Tourism International Press.

Wahab, S., Crampon, L. J., & Rothfield, L. M. (1976). *Tourism Marketing. A destination-oriented programme for the marketing of international tourism*. London: Tourism International Press.

Weiner, B. (1992). *Human Motivation: Metaphors, Theories, and Research*. Thousand Oaks, California: Sage.

Witt, C. A., & Wright, P. L. (1992). Tourism Motivation: Life after Maslow. In: P. Johnson, & B. Thomas (Eds.), *Choice and Demand in Tourism* (pp. 33-55). London: Mansell Publishing.

Zalatan, A. (1996). The determinants of planning time in vacation travel. *Tourism Management, 17*(2), 123-131.

Zedeck, S. (1977). An Information Processing Model and Approach to the Study of Motivation. *Organizational Behavior and Human Performance, 18*, 47-77.

Zins, A. H. (1997). A European Vacation Style Typology: Strategic Issues for Tourism Marketing. In: J. Kleiven (Ed.), *Conference Proceedings 3: Segmentation in European Travel and Tourism* (pp. 51-71). Lillehammer: Lillehammer College.

Aasetre, J., Kleiven, J., & Kaltenborn, B. (1994). *Friluftsliv i Norge - Motivasjon og atferd [Outdoor Recreation in Norway – Motivation and Behavior]*. (Oppdragsmelding 309). Trondheim: Norwegian Institute for Nature Research.

APPENDIX[11]

I. Kleiven, J. (2005). Measuring Leisure and Travel Motives in Norway — Replicating and Supplementing the Leisure Motivation Scales. *Tourism Analysis, 10*(2), 109-122.

II. Kleiven, J. (2006) Eight Scales for Leisure Travel Research — Replicating and Revising the Lillehammer Scales. *Research Report 131/2006*. Lillehammer: Lillehammer University College.

III. Prebensen, N. K., & Kleiven, J. (2006b). Stability in Outbound Travel Motivation: A Norwegian Example. *Tourism Analysis, 10*(3), 233-245.

IV. Kleiven, J. (2000). Leisure Motives as Predictors of Activities: The Lillehammer Scales in a National Survey. In J. Ruddy, & S. Flanagan (Eds.), *Tourism Destination Marketing: Gaining the Competitive Edge* (pp. 65-73). Dublin: Tourism Research Centre, Dublin Institute of Technology.

V. Prebensen, N. K., & Kleiven, J. (2006a). Determined Sun-Seekers and Others — Travel Motives, Holiday Type, and Holiday Behavior Among Norwegian Charter Tourists. *Journal of Hospitality and Leisure Marketing, 14*(1), 75-97.

---

[11] ***Permission to reprint the articles has been granted by:***

Cognizant Comm.Corp. (Articles I and III),

Lillehammer University College (Article II),

Dublin Institute of Technology (Article IV), and

Haworth Hospitality Press (Article V).

Doctoral Theses at The Faculty of Psychology, University of Bergen

1980	Allen, H.M., Dr. philos.	Parent-offspring interactions in willow grouse (Lagopus L. Lagopus).
1981	Myhrer, T., Dr. philos.	Behavioral Studies after selective disruption of hippocampal inputs in albino rats.
1982	Svebak, S., Dr. philos.	The significance of motivation for task-induced tonic physiological changes.
1983	Myhre, G., Dr. philos.	The Biopsychology of behavior in captive Willow ptarmigan.
	Eide, R., Dr. philos.	PSYCHOSOCIAL FACTORS AND INDICES OF HEALTH RISKS. The relationship of psychosocial conditions to subjective complaints, arterial blood pressure, serum cholesterol, serum triglycerides and urinary catecholamines in middle aged populations in Western Norway.
	Værnes, R.J., Dr. philos.	Neuropsychological effects of diving.
1984	Kolstad, A., Dr. philos.	Til diskusjonen om sammenhengen mellom sosiale forhold og psykiske strukturer. En epidemiologisk undersøkelse blant barn og unge.
	Løberg, T., Dr. philos.	Neuropsychological assessment in alcohol dependence.
1985	Hellesnes, T., Dr. philos.	Læring og problemløsning. En studie av den perseptuelle analysens betydning for verbal læring.
	Håland, W., Dr. philos.	Psykoterapi: relasjon, utviklingsprosess og effekt.
1986	Hagtvet, K.A., Dr. philos.	The construct of test anxiety: Conceptual and methodological issues.
	Jellestad, F.K., Dr. philos.	Effects of neuron specific amygdala lesions on fear-motivated behavior in rats.
1987	Aarø, L.E., Dr. philos.	Health behaviour and sosioeconomic Status. A survey among the adult population in Norway.
	Underlid, K., Dr. philos.	Arbeidsløyse i psykososialt perspektiv.
	Laberg, J.C., Dr. philos.	Expectancy and classical conditioning in alcoholics' craving.
	Vollmer, F.C., Dr. philos.	Essays on explanation in psychology.
	Ellertsen, B., Dr. philos.	Migraine and tension headache: Psychophysiology, personality and therapy.
1988	Kaufmann, A., Dr. philos.	Antisosial atferd hos ungdom. En studie av psykologiske determinanter.

	Mykletun, R.J., Dr. philos.	Teacher stress: personality, work-load and health.
	Havik, O.E., Dr. philos.	After the myocardial infarction: A medical and psychological study with special emphasis on perceived illness.
1989	Bråten, S., Dr. philos.	Menneskedyaden. En teoretisk tese om sinnets dialogiske natur med informasjons- og utviklingspsykologiske implikasjoner sammenholdt med utvalgte spedbarnsstudier.
	Wold, B., Dr. psychol.	Lifestyles and physical activity. A theoretical and empirical analysis of socialization among children and adolescents.
1990	Flaten, M.A., Dr. psychol.	The role of habituation and learning in reflex modification.
1991	Alsaker, F.D., Dr. philos.	Global negative self-evaluations in early adolescence.
	Kraft, P., Dr. philos.	AIDS prevention in Norway. Empirical studies on diffusion of knowledge, public opinion, and sexual behaviour.
	Endresen, I.M., Dr. philos.	Psychoimmuniological stress markers in working life.
	Faleide, A.O., Dr. philos.	Asthma and allergy in childhood. Psychosocial and psychotherapeutic problems.
1992	Dalen, K., Dr. philos.	Hemispheric asymmetry and the Dual-Task Paradigm: An experimental approach.
	Bø, I.B., Dr. philos.	Ungdoms sosiale økologi. En undersøkelse av 14-16 åringers sosiale nettverk.
	Nivison, M.E., Dr. philos.	The relationship between noise as an experimental and environmental stressor, physiological changes and psychological factors.
	Torgersen, A.M., Dr. philos.	Genetic and environmental influence on temperamental behaviour. A longitudinal study of twins from infancy to adolescence.
1993	Larsen, S., Dr. philos.	Cultural background and problem drinking.
	Nordhus, I.H., Dr. philos.	Family caregiving. A community psychological study with special emphasis on clinical interventions.
	Thuen, F., Dr. psychol.	Accident-related behaviour among children and young adolescents: Prediction and prevention.
	Solheim, R., Dr. philos.	Spesifikke lærevansker. Diskrepanskriteriet anvendt i seleksjonsmetodikk.
	Johnsen, B.H., Dr. psychol.	Brain assymetry and facial emotional expressions: Conditioning experiments.
1994	Tønnessen, F.E., Dr. philos.	The etiology of Dyslexia.
	Kvale, G., Dr. psychol.	Psychological factors in anticipatory nausea and vomiting in cancer chemotherapy.
	Asbjørnsen, A.E., Dr. psychol.	Structural and dynamic factors in dichotic listening: An interactional model.

	Bru, E., Dr. philos.	The role of psychological factors in neck, shoulder and low back pain among female hospitale staff.
	Braathen, E.T., Dr. psychol.	Prediction of exellence and discontinuation in different types of sport: The significance of motivation and EMG.
	Johannessen, B.F., Dr. philos.	Det flytende kjønnet. Om lederskap, politikk og identitet.
1995	Sam, D.L., Dr. psychol.	Acculturation of young immigrants in Norway: A psychological and socio-cultural adaptation.
	Bjaalid, I.-K., Dr. philos	Component processes in word recognition.
	Martinsen, Ø., Dr. philos.	Cognitive style and insight.
	Nordby, H., Dr. philos.	Processing of auditory deviant events: Mismatch negativity of event-related brain potentials.
	Raaheim, A., Dr. philos.	Health perception and health behaviour, theoretical considerations, empirical studies, and practical implications.
	Seltzer, W.J., Dr.philos.	Studies of Psychocultural Approach to Families in Therapy.
	Brun, W., Dr.philos.	Subjective conceptions of uncertainty and risk.
	Aas, H.N., Dr. psychol.	Alcohol expectancies and socialization: Adolescents learning to drink.
	Bjørkly, S., Dr. psychol.	Diagnosis and prediction of intra-institutional aggressive behaviour in psychotic patients
1996	Anderssen, N., Dr. psychol.	Physical activity of young people in a health perspective: Stability, change and social influences.
	Sandal, Gro Mjeldheim, Dr. psychol.	Coping in extreme environments: The role of personality.
	Strumse, Einar, Dr. philos.	The psychology of aesthetics: explaining visual preferences for agrarian landscapes in Western Norway.
	Hestad, Knut, Dr. philos.	Neuropsychological deficits in HIV-1 infection.
	Lugoe, L.Wycliffe, Dr. philos.	Prediction of Tanzanian students' HIV risk and preventive behaviours
	Sandvik, B. Gunnhild, Dr. philos.	Fra distriktsjordmor til institusjonsjordmor. Fremveksten av en profesjon og en profesjonsutdanning
	Lie, Gro Therese, Dr. psychol.	The disease that dares not speak its name: Studies on factors of importance for coping with HIV/AIDS in Northern Tanzania
	Øygard, Lisbet, Dr. philos.	Health behaviors among young adults. A psychological and sociological approach
	Stormark, Kjell Morten, Dr. psychol.	Emotional modulation of selective attention: Experimental and clinical evidence.
	Einarsen, Ståle, Dr. psychol.	Bullying and harassment at work: epidemiological and psychosocial aspects.

1997	Knivsberg, Ann-Mari, Dr. philos.	Behavioural abnormalities and childhood psychopathology: Urinary peptide patterns as a potential tool in diagnosis and remediation.
	Eide, Arne H., Dr. philos.	Adolescent drug use in Zimbabwe. Cultural orientation in a global-local perspective and use of psychoactive substances among secondary school students.
	Sørensen, Marit, Dr. philos.	The psychology of initiating and maintaining exercise and diet behaviour.
	Skjæveland, Oddvar, Dr. psychol.	Relationships between spatial-physical neighborhood attributes and social relations among neighbors.
	Zewdie, Teka, Dr. philos.	Mother-child relational patterns in Ethiopia. Issues of developmental theories and intervention programs.
	Wilhelmsen, Britt Unni, Dr. philos.	Development and evaluation of two educational programmes designed to prevent alcohol use among adolescents.
	Manger, Terje, Dr. philos.	Gender differences in mathematical achievement among Norwegian elementary school students.
1998		
V	Lindstrøm, Torill Christine, Dr. philos.	«Good Grief»: Adapting to Bereavement.
	Skogstad, Anders, Dr. philos.	Effects of leadership behaviour on job satisfaction, health and efficiency.
	Haldorsen, Ellen M. Håland, Dr. psychol.	Return to work in low back pain patients.
	Besemer, Susan P., Dr. philos.	Creative Product Analysis: The Search for a Valid Model for Understanding Creativity in Products.
H	Winje, Dagfinn, Dr. psychol.	Psychological adjustment after severe trauma. A longitudinal study of adults' and children's posttraumatic reactions and coping after the bus accident in Måbødalen, Norway 1988.
	Vosburg, Suzanne K., Dr. philos.	The effects of mood on creative problem solving.
	Eriksen, Hege R., Dr. philos.	Stress and coping: Does it really matter for subjective health complaints?
	Jakobsen, Reidar, Dr. psychol.	Empiriske studier av kunnskap og holdninger om hiv/aids og den normative seksuelle utvikling i ungdomsårene.
1999		
V	Mikkelsen, Aslaug, Dr. philos.	Effects of learning opportunities and learning climate on occupational health.
	Samdal, Oddrun, Dr. philos.	The school environment as a risk or resource for students' health-related behaviours and subjective well-being.
	Friestad, Christine, Dr. philos.	Social psychological approaches to smoking.
	Ekeland, Tor-Johan, Dr. philos.	Meining som medisin. Ein analyse av placebofenomenet og implikasjoner for terapi og terapeutiske teoriar.

H	Saban, Sara, Dr. psychol.	Brain Asymmetry and Attention: Classical Conditioning Experiments.
	Carlsten, Carl Thomas, Dr. philos.	God lesing – God læring. En aksjonsrettet studie av undervisning i fagtekstlesing.
	Dundas, Ingrid, Dr. psychol.	Functional and dysfunctional closeness. Family interaction and children's adjustment.
	Engen, Liv, Dr. philos.	Kartlegging av leseferdighet på småskoletrinnet og vurdering av faktorer som kan være av betydning for optimal leseutvikling.
2000		
V	Hovland, Ole Johan, Dr. philos.	Transforming a self-preserving "alarm" reaction into a self-defeating emotional response: Toward an integrative approach to anxiety as a human phenomenon.
	Lillejord, Sølvi, Dr. philos.	Handlingsrasjonalitet og spesialundervisning. En analyse av aktørperspektiver.
	Sandell, Ove, Dr. philos.	Den varme kunnskapen.
	Oftedal, Marit Petersen, Dr. philos.	Diagnostisering av ordavkodingsvansker: En prosessanalytisk tilnærmingsmåte.
H	Sandbak, Tone, Dr. psychol.	Alcohol consumption and preference in the rat: The significance of individual differences and relationships to stress pathology
	Eid, Jarle, Dr. psychol.	Early predictors of PTSD symptom reporting; The significance of contextual and individual factors.
2001		
V	Skinstad, Anne Helene, Dr. philos.	Substance dependence and borderline personality disorders.
	Binder, Per-Einar, Dr. psychol.	Individet og den meningsbærende andre. En teoretisk undersøkelse av de mellommenneskelige forutsetningene for psykisk liv og utvikling med utgangspunkt i Donald Winnicotts teori.
	Roald, Ingvild K., Dr. philos.	Building of concepts. A study of Physics concepts of Norwegian deaf students.
H	Fekadu, Zelalem W., Dr. philos.	Pridicting contraceptive use and intention among a sample of adolescent girls. An application of the theory of planned behaviour in Ethiopian context.
	Melesse, Fantu, Dr. philos.	The more intelligent and sensitive child (MISC) mediational intervention in an Ethiopian context: An evaluation study.
	Råheim, Målfrid, Dr. philos.	Kvinners kroppserfaring og livssammenheng. En fenomenologisk – hermeneutisk studie av friske kvinner og kvinner med kroniske muskelsmerter.
	Engelsen, Birthe Kari, Dr. psychol.	Measurement of the eating problem construct.
	Lau, Bjørn, Dr. philos.	Weight and eating concerns in adolescence.
2002		
V	Ihlebæk, Camilla, Dr. philos.	Epidemiological studies of subjective health complaints.

	Rosén, Gunnar O. R., Dr. philos.	The phantom limb experience. Models for understanding and treatment of pain with hypnosis.
	Høines, Marit Johnsen, Dr. philos.	Fleksible språkrom. Matematikklæring som tekstutvikling.
	Anthun, Roald Andor, Dr. philos.	School psychology service quality. Consumer appraisal, quality dimensions, and collaborative improvement potential
	Pallesen, Ståle, Dr. psychol.	Insomnia in the elderly. Epidemiology, psychological characteristics and treatment.
	Midthassel, Unni Vere, Dr. philos.	Teacher involvement in school development activity. A study of teachers in Norwegian compulsory schools
	Kallestad, Jan Helge, Dr. philos.	Teachers, schools and implementation of the Olweus Bullying Prevention Program.
H	Ofte, Sonja Helgesen, Dr. psychol.	Right-left discrimination in adults and children.
	Netland, Marit, Dr. psychol.	Exposure to political violence. The need to estimate our estimations.
	Diseth, Åge, Dr. psychol.	Approaches to learning: Validity and prediction of academic performance.
	Bjuland, Raymond, Dr. philos.	Problem solving in geometry. Reasoning processes of student teachers working in small groups: A dialogical approach.
2003		
V	Arefjord, Kjersti, Dr. psychol.	After the myocardial infarction – the wives' view. Short- and long-term adjustment in wives of myocardial infarction patients.
	Ingjaldsson, Jón Þorvaldur, Dr. psychol.	Unconscious Processes and Vagal Activity in Alcohol Dependency.
	Holden, Børge, Dr. philos.	Følger av atferdsanalytiske forklaringer for atferdsanalysens tilnærming til utforming av behandling.
	Holsen, Ingrid, Dr. philos.	Depressed mood from adolescence to 'emerging adulthood'. Course and longitudinal influences of body image and parent-adolescent relationship.
	Hammar, Åsa Karin, Dr. psychol.	Major depression and cognitive dysfunction- An experimental study of the cognitive effort hypothesis.
	Sprugevica, Ieva, Dr. philos.	The impact of enabling skills on early reading acquisition.
	Gabrielsen, Egil, Dr. philos.	LESE FOR LIVET. Lesekompetansen i den norske voksenbefolkningen sett i lys av visjonen om en enhetsskole.
H	Hansen, Anita Lill, Dr. psychol.	The influence of heart rate variability in the regulation of attentional and memory processes.
	Dyregrov, Kari, Dr. philos.	The loss of child by suicide, SIDS, and accidents: Consequences, needs and provisions of help.
2004		
V	Torsheim, Torbjørn, Dr. psychol.	Student role strain and subjective health complaints: Individual, contextual, and longitudinal perspectives.

	Haugland, Bente Storm Mowatt Dr. psychol.	Parental alcohol abuse. Family functioning and child adjustment.
	Milde, Anne Marita, Dr. psychol.	Ulcerative colitis and the role of stress. Animal studies of psychobiological factors in relationship to experimentally induced colitis.
	Stornes, Tor, Dr. philos.	Socio-moral behaviour in sport. An investigation of perceptions of sportspersonship in handball related to important factors of socio-moral influence.
	Mæhle, Magne, Dr. philos.	Re-inventing the child in family therapy: An investigation of the relevance and applicability of theory and research in child development for family therapy involving children.
	Kobbeltvedt, Therese, Dr. psychol.	Risk and feelings: A field approach.
2004 H	Thomsen, Tormod, Dr. psychol.	Localization of attention in the brain.
	Løberg, Else-Marie, Dr. psychol.	Functional laterality and attention modulation in schizophrenia: Effects of clinical variables.
	Kyrkjebø, Jane Mikkelsen, Dr. philos.	Learning to improve: Integrating continuous quality improvement learning into nursing education.
	Laumann, Karin, Dr. psychol.	Restorative and stress-reducing effects of natural environments: Experiencal, behavioural and cardiovascular indices.
	Holgersen, Helge, PhD	Mellom oss - Essay i relasjonell psykoanalyse.
2005 V	Hetland, Hilde, Dr. psychol.	Leading to the extraordinary? Antecedents and outcomes of transformational leadership.
	Iversen, Anette Christine, Dr. philos.	Social differences in health behaviour: the motivational role of perceived control and coping.
2005 H	Mathisen, Gro Ellen, PhD	Climates for creativity and innovation: Definitions, measurement, predictors and consequences.
	Sævi, Tone, Dr. philos.	Seeing disability pedagogically – The lived experience of disability in the pedagogical encounter.
	Wiium, Nora, PhD	Intrapersonal factors, family and school norms: combined and interactive influence on adolescent smoking behaviour.
	Kanagaratnam, Pushpa, PhD	Subjective and objective correlates of Posttraumatic Stress in immigrants/refugees exposed to political violence.
	Larsen, Torill M. B. , PhD	Evaluating principals` and teachers` implementation of Second Step. A case study of four Norwegian primary schools.
	Bancila, Delia, PhD	Psychosocial stress and distress among Romanian adolescents and adults.

2006		
V	Hillestad, Torgeir Martin, Dr. philos.	Normalitet og avvik. Forutsetninger for et objektivt psykopatologisk avviksbegrep. En psykologisk, sosial, erkjennelsesteoretisk og teorihistorisk framstilling.
	Nordanger, Dag Øystein, Dr. psychol.	Psychosocial discourses and responses to political violence in post-war Tigray, Ethiopia.
	Rimol, Lars Morten, PhD	Behavioral and fMRI studies of auditory laterality and speech sound processing.
	Krumsvik, Rune Johan, Dr. philos.	ICT in the school. ICT-initiated school development in lower secondary school.
	Norman, Elisabeth, Dr. psychol.	Gut feelings and unconscious thought: An exploration of fringe consiousness in implicit cognition.
	Israel, K Pravin, Dr. psychol.	Parent involvement in the mental health care of children and adolescents. Emperical studies from clinical care setting.
	Glasø, Lars, PhD	Affects and emotional regulation in leader-subordinate relationships.
	Knutsen, Ketil, Dr. philos.	HISTORIER UNGDOM LEVER – En studie av hvordan ungdommer bruker historie for å gjøre livet meningsfullt.
	Matthiesen, Stig Berge, PhD	Bullying at work. Antecedents and outcomes.
2006	Gramstad, Arne, PhD	Neuropsychological assessment of cognitive and emotional functioning in patients with epilepsy.
H		
	Bendixen, Mons, PhD	Antisocial behaviour in early adolescence: Methodological and substantive issues.
	Mrumbi, Khalifa Maulid, PhD	Parental illness and loss to HIV/AIDS as experienced by AIDS orphans aged between 12-17 years from Temeke District, Dar es Salaam, Tanzania: A study of the children's psychosocial health and coping responses.
	Hetland, Jørn, Dr. psychol.	The nature of subjective health complaints in adolescence: Dimensionality, stability, and psychosocial predictors
	Kakoko, Deodatus Conatus Vitalis, PhD	Voluntary HIV counselling and testing service uptake among primary school teachers in Mwanza, Tanzania: assessment of socio-demographic, psychosocial and socio-cognitive aspects
	Mykletun, Arnstein, Dr. psychol.	Mortality and work-related disability as long-term consequences of anxiety and depression: Historical cohort designs based on the HUNT-2 study
	Sivertsen, Børge, PhD	Insomnia in older adults. Consequences, assessment and treatment.
2007		
V	Singhammer, John, Dr. philos.	Social conditions from before birth to early adulthood – the influence on health and health behaviour
	Janvin, Carmen Ani Cristea, PhD	Cognitive impairment in patients with Parkinson's disease: profiles and implications for prognosis

	Braarud, Hanne Cecilie, Dr.psychol.	Infant regulation of distress: A longitudinal study of transactions between mothers and infants
	Tveito, Torill Helene, PhD	Sick Leave and Subjective Health Complaints
	Magnussen, Liv Heide, PhD	Returning disability pensioners with back pain to work
	Thuen, Elin Marie, Dr.philos.	Learning environment, students' coping styles and emotional and behavioural problems. A study of Norwegian secondary school students.
	Solberg, Ole Asbjørn, PhD	Peacekeeping warriors – A longitudinal study of Norwegian peacekeepers in Kosovo
2007 H	Søreide, Gunn Elisabeth, Dr.philos.	Narrative construction of teacher identity
	Svensen, Erling, PhD	WORK & HEALTH. Cognitive Activation Theory of Stress applied in an organisational setting.
	Øverland, Simon Nygaard, PhD	Mental health and impairment in disability benefits. Studies applying linkages between health surveys and administrative registries.
	Eichele, Tom, PhD	Electrophysiological and Hemodynamic Correlates of Expectancy in Target Processing
	Børhaug, Kjetil, Dr.philos.	Oppseding til demokrati. Ein studie av politisk oppseding i norsk skule.
	Eikeland, Thorleif, Dr.philos.	Om å vokse opp på barnehjem og på sykehus. En undersøkelse av barnehjemsbarns opplevelser på barnehjem sammenholdt med sanatoriebarns beskrivelse av langvarige sykehusopphold – og et forsøk på forklaring.
	Wadel, Carl Cato, Dr.philos.	Medarbeidersamhandling og medarbeiderledelse i en lagbasert organisasjon
	Vinje, Hege Forbech, PhD	Thriving despite adversity: Job engagement and self-care among community nurses
	Noort, Maurits van den, PhD	Working memory capacity and foreign language acquisition
2008 V	Breivik, Kyrre, Dr.psychol.	The Adjustment of Children and Adolescents in Different Post-Divorce Family Structures. A Norwegian Study of Risks and Mechanisms.
	Johnsen, Grethe E., PhD	Memory impairment in patients with posttraumatic stress disorder
	Sætrevik, Bjørn, PhD	Cognitive Control in Auditory Processing
	Carvalhosa, Susana Fonseca, PhD	Prevention of bullying in schools: an ecological model
2008 H	Brønnick, Kolbjørn Selvåg	Attentional dysfunction in dementia associated with Parkinson's disease.

	Posserud, Maj-Britt Rocio	Epidemiology of autism spectrum disorders
	Haug, Ellen	Multilevel correlates of physical activity in the school setting
	Skjerve, Arvid	Assessing mild dementia – a study of brief cognitive tests.
	Kjønniksen, Lise	The association between adolescent experiences in physical activity and leisure time physical activity in adulthood: a ten year longitudinal study
	Gundersen, Hilde	The effects of alcohol and expectancy on brain function
	Omvik, Siri	Insomnia – a night and day problem
2009 V	Molde, Helge	Pathological gambling: prevalence, mechanisms and treatment outcome.
	Foss, Else	Den omsorgsfulle væremåte. En studie av voksnes væremåte i forhold til barn i barnehagen.
	Westrheim, Kariane	Education in a Political Context: A study of Konwledge Processes and Learning Sites in the PKK.
	Wehling, Eike	Cognitive and olfactory changes in aging
	Wangberg, Silje C.	Internet based interventions to support health behaviours: The role of self-efficacy.
	Nielsen, Morten B.	Methodological issues in research on workplace bullying. Operationalisations, measurements and samples.
	Sandu, Anca Larisa	MRI measures of brain volume and cortical complexity in clinical groups and during development.
	Guribye, Eugene	Refugees and mental health interventions
	Sørensen, Lin	Emotional problems in inattentive children – effects on cognitive control functions.
	Tjomsland, Hege E.	Health promotion with teachers. Evaluation of the Norwegian Network of Health Promoting Schools: Quantitative and qualitative analyses of predisposing, reinforcing and enabling conditions related to teacher participation and program sustainability.
	Helleve, Ingrid	Productive interactions in ICT supported communities of learners
2009 H	Skorpen, Aina Øye, Christine	Dagliglivet i en psykiatrisk institusjon: En analyse av miljøterapeutiske praksiser