

**INCORPORATING LEISURE CONSTRAINTS THEORY INTO
HAGGER'S *ET AL.* (2006) MULTI-THEORY FRAMEWORK:
The roles of anticipated constraint and anticipated constraint
negotiation**

Gordon J. Walker

Faculty of Physical Education and Recreation

University of Alberta

Edmonton, Alberta

Canada

Email: gordon.walker@ualberta.ca

Telephone: 1.780.492.0581

Fax: 1.780.492.2364

Abstract

The purpose of this study was to examine how two leisure constraints theory elements could be incorporated into Hagger's *et al.* (2006) synthesis of self-determination theory and the theory of planned behaviour. A hierarchical regression analysis was conducted where intention to casino gamble during the next six months was regressed on: first, relative autonomy; second, attitudes, subjective norm, and personal control, and third, anticipated constraints and anticipated constraint negotiation. Results suggest that inclusion of anticipated constraint negotiation significantly improved the regression model's predictive ability. Findings are discussed in regard to both "theory shyness" and "theory boldness".

Keywords: constraint, gambling, intention, leisure, motivation, theory

Incorporating Leisure Constraints Theory into Hagger's *et al.* (2006) Multi-Theory Framework: The roles of anticipated constraint and anticipated constraint negotiation

1. Introduction

Social scientists often seek to explain and predict human behaviour. Two well known ways of doing so are Deci and Ryan's (1985) self-determination theory (SDT) and Ajzen's (1991) theory of planned behaviour (TPB). Both SDT and TPB meet commonly espoused criteria for "good" theory (Popper, 1957), including being parsimonious (e.g., Crawford and Jackson, 2005; Fiske, 2004; Wacker, 1998). But in striving for parsimony "theory shyness" may have inadvertently resulted; that is, an over-emphasis on more modest "midrange" theorizing at the expense of more broad, unitary, or "grand" theorizing (Kruglanski, 2001).

Merton was amongst the first to discuss this trade-off, stating several years ago that:

I believe—and beliefs are of course notoriously subject to error—that theories of the middle range hold the largest promise, *provided that* the search for them is coupled with a pervasive concern with consolidating special theories into more general sets of concepts and mutually consistent propositions. Even so, we must adopt the provisional outlook of our big brothers and of Tennyson: "Our little systems have their day; They have their day and cease to be." (1968, pp.52-53)

Popper (1959; as cited in Kruglanski, 2001) and Kruglanski (2001) concurred, with both prompting social scientists to have the "guts" to propose more general theory.

Correspondingly, Crawford and Jackson (2005) held that being "integrative" was another characteristic of good theory, meaning that midrange theories might "on some happy future day be assimilated or integrated into 'grand' theory" (p.161). Unfortunately, attempts at such assimilation have been relatively rare; with one of the few exceptions being Hagger's *et al.* (2006) work wherein they combined SDT and TPB. In a more narrow manner, Walker *et al.* (2006) identified similarities and differences in some of the variables in TPB and leisure constraints theory (LCT; Crawford *et al.*, 1991); with Kleiber *et al.* (2011) subsequently speculating that LCT itself might be incorporable into Hagger and colleagues' configuration. Just such a likelihood was in fact anticipated by Crawford and Jackson, who stated that they thought

it was entirely possible that leisure “constraints theory itself may some day be completely swallowed up by future theoretical developments, an event that would underscore both the integrative function of theory and the role of theory in science” (p.161). Based on the above, therefore, the purpose of this study was to examine how two specific LCT elements—anticipated constraint and anticipated constraint negotiation (Jackson *et al.*, 1993)—could be incorporated into Hagger’s *et al.* multi-theory framework.

2. Literature Review

In the following sub-sections pertinent aspects of self-determination theory (Deci and Ryan, 1985) and the theory of planned behaviour (Ajzen, 1991), as well as Hagger’s *et al.* (2006) synthesis of the two, are briefly reviewed. An overview of key feature of leisure constraints theory (Crawford *et al.*, 1991) follows, with particular emphasis placed on how anticipated constraint and anticipated constraint negotiation (Jackson *et al.*, 1993) could be incorporated into Hagger and associates’ multi-theory framework.

2.1 Self-determination theory and the theory of planned behaviour

Deci and Ryan (1985) hold that motivations range from intrinsic to integrated to identified to introjected to external; with the first having the greatest degree of autonomy (or self-determination) and the last the least. *Intrinsic* motivation involves interest, enjoyment, and engagement in activities for their own sake (Deci and Ryan, 1985). *Integrated* motivation involves evaluation and assimilation into the self, whereas *identified* motivation involves valuing a goal as being personally important (Ryan and Deci, 2000). In contrast, *introjected* motivations are performed to enhance internal rewards (e.g., pride) or avoid internal punishments (e.g., guilt), whereas *external* motivations are performed to obtain external rewards or avoid external punishments (Ryan and Deci, 2000). Researchers often estimate a “relative autonomy index” (RAI) by assigning weights to each motive based on their comparative level of self-determination (Grolnick and Ryan, 1987).

In contrast, Ajzen’s (1991) theory of planned behaviour holds that an individual’s *actual behaviour* is largely dependent on his or her *intention* to perform that behaviour which, in turn, is determined by: (a) the person’s *attitudes* toward the behaviour; (b) the *subjective norms* (or SN)

he or she believes significant others have concerning the behaviour; and (c) his or her perception of the ease with which the behaviour can be performed (i.e., *perceived behavioural control*, or PBC).

2.2 Hagger's *et al.* (2006) multi-theory framework

Hagger *et al.* (2006) proposed that an integrative theoretical framework could be created, using Vallerand's (1997) hierarchical model of motivation for guidance, where: (a) TPB, in terms of attitude, SN, PBC, intention, and actual behaviour, is located at the most proximal or *situational* level; (b) SDT, in terms of RAI, is located at the *contextual* level; and (c) autonomy, competence, and interpersonal relatedness needs (an SDT sub-theory) are located at the most distal or *global* level. Hagger *et al.* tested their framework in terms of dieting and exercising and support was found in both instances. A subsequent meta-analysis of health behaviour (Hagger and Chatzisarantis, 2009) provided further support for their framework. Interestingly, some of the pathways between the variables in each of these three activities differed with, for example: (a) RAI significantly affecting intention, but only for dieting; (b) RAI significantly affecting SN, but only for health behaviours; and (c) SN not influencing intention to exercise at a significant level. Hagger *et al.* anticipated such variation and stated that this was "congruent with expectations that behaviors with similar underlying goals would have similar antecedents but differences in the pattern of influence" (p. 145).

2.3 Leisure constraints theory and Hagger's *et al.* (2006) multi-theory framework

Leisure constraints are "factors that are assumed by researchers and/or perceived or experienced by individuals to limit the formation of leisure preferences and/or inhibit or prohibit participation and enjoyment in leisure" (Jackson, 2000, p. 62). LCT holds that there are three types of constraints (Crawford and Godbey, 1987): (a) *intrapersonal* constraints, which are individual psychological qualities that affect the formation of leisure preferences (e.g., anxiety, perceived lack of skill); (b) *interpersonal* constraints, which are social factors that occur after leisure preferences are formed but before actual leisure participation takes place (e.g., friends or family members who prefer similar or other activities); and (c) *structural* constraints, which are non-social factors that occur after leisure preferences are formed but before actual leisure

participation takes place (e.g., lack of time or money). Jackson *et al.* (1993) further refined LCT by proposing that: (a) participation was not dependent on the absence of constraints but rather on people's ability to "negotiate" through them; (b) while anticipation of interpersonal and structural constraints may suppress the desire for participation, these barriers may be overcome as a result of one's anticipation that he or she can negotiate through them; and (c) both constraints and motivations affect constraint negotiation (and, by extension, it seems likely that anticipated constraint negotiation would be similarly influenced).

Walker *et al.* (2007) posited that there were numerous overlaps between LCT and TPB. They recognized, for example, that (pp. 569-570):

Although behavioral intentions and intrapersonal constraints initially appeared to be distinct constructs, both are antecedent to actual behavior. Additionally, Perugini and Bagozzi (2001) contended that behavioral intentions (i.e., "I intend to...") are preceded by behavioral desires (i.e., "I want to..."), and Crawford and Godbey (1987) discuss leisure preferences as "the *desire* [italics added] to participate" and people not getting the "chance to do what they would like" (p. 121).

Walker *et al.* went on to add that:

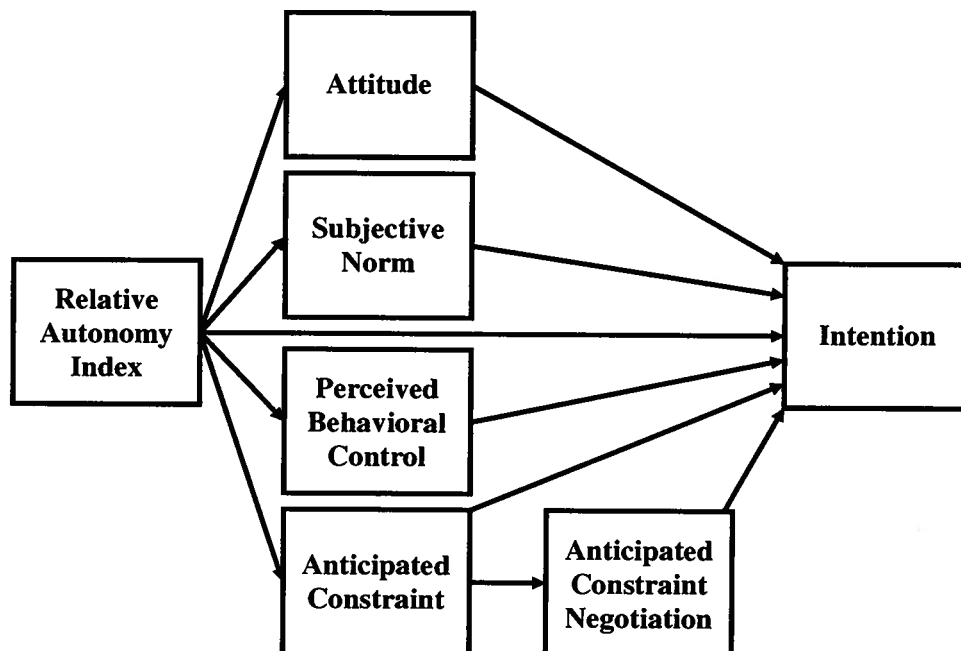
Crawford and Godbey (1987) stated that intrapersonal constraints include individual psychological states (e.g., stress, anxiety, fatigue, depression), "religiosity, kin and non-kin reference group attitudes, prior socialization into specific leisure activities, perceived self-skill, and subjective evaluations of the appropriateness and availability of various leisure activities" (p. 122). Although Crawford and Godbey did not mention how they developed their list, at least two of the variables they identified are conceptually similar to those found in the theory of planned behavior's precursor, the theory of reasoned action (TRA). Specifically, the concept of "subjective evaluations" is analogous with Ajzen's (2001, p. 28) definition of an attitude (i.e., "a summary evaluation of a psychological object"), while "reference group attitudes" are comparable with Ajzen's (2002, p. 1) description of a subjective norm.

Finally, Walker and associates referred to prefactuals, whereby a person imagines an anticipated negative outcome and its alternatives which, in turn, influence his or her intentions and behavior (Gleicher *et al.*, 1995). One well known TPB-related example is “anticipated regret”, which Sheeran and Orbell (1999) showed had significant effects on lottery ticket intention above and beyond the variables of attitude, SN, and PBC. Potentially, anticipated constraint might also be a prefactual, with anticipated constraint negotiation being construed as ways of potentially countering these perceived obstacles.

Based on the above, a preliminary conceptualization of how LCT’s concepts of anticipated constraint and anticipated constraint negotiation could be incorporated into Hagger’s *et al.* (2006) multi-theory framework is provided (Figure 1). (*Note.* Because psychological need satisfaction and behaviour are not examined in this paper they are not shown in the diagram.)

Fig. 1

Hagger’s *et al.* (2006) Preliminary Multi-Theory Framework with Anticipated Constraint and Anticipated Constraint Negotiation Incorporated



3. Method

3.1 Questionnaire Scales and Items

Participants completed a questionnaire that asked them to report, based on TPB, their: (a) attitudes (three items, including: “For me, gambling at a casino in the next six months would be very harmful, slightly harmful, neither, slightly beneficial, very beneficial”); (b) subjective norms (three items, including: “How would most of the people who are important to you feel about you gambling at a casino in the next six months? Would they strongly disapprove, slightly disapprove, neither, slightly approve, strongly approve.”); and (c) perceived behavioural control (two items, including: “How much personal control do you feel you would have over gambling at a casino in the next six months, even if you were really motivated: absolutely no control, slight control, moderate control, a great deal of control, complete control.”). In accord with SDT, they also reported their intrinsic, identified, introjected, and external motivations (two items per, from Chantal *et al.*, 1994, Gambling Motivation Scale) for casino gambling during the next six months, using five-point Likert scales. Intention to bet or spend money on casino games in the next six months was measured first with a “yes/ no” question followed by, if the former was selected, a series of questions regarding on which specific activities (i.e., card games, table games, slot machines, video lottery terminals, other) and how often for each. Those who indicated that they intended to gamble in the next six months also reported the degree (i.e., never, sometimes, often, very often) to which they: (a) anticipated five structural constraints (e.g., “Not having enough time.”) and three intrapersonal constraints (e.g., “Your friends/family not having enough time to go with you.”) might affect them; and (b) anticipated how eight constraint negotiation strategies (e.g., “I would try to plan ahead so I could go casino gambling”) might help them overcome these barriers. Basic socio-demographic information was also collected.

3.2 Sample

After pre-testing was completed, a random sample of adults living in a major Canadian metropolitan centre was generated, and then computer-assisted telephone interviewing commenced. Nineteen hundred and eighty five different telephone numbers were called, with 401 individuals agreeing to participate in the study: 81 male casino gamblers (20.2%), 101 male

non-casino gamblers (25.2%), 119 female casino gamblers (29.7%), and 100 female non-casino gamblers (24.9%). The low response rate (20.2%) may be attributable to sensitivity concerning the topic and decreased public interest in telephone surveys, although these issues were likely at least somewhat assuaged by each participant being remunerated \$10 Canadian.

3.3 Planned Data Analyses

Planned data analysis consisted of five stages: (a) participants' socio-demographic characteristics were examined; (b) participants who reported that they did not intend to gamble in the next six months had their anticipated constraint and anticipated constraint negotiation scores recoded as "Never" (i.e., "0"); (c) frequency of intention was calculated by summing all the casino games the person reported intending to play in the next six months; (d) item means and standard deviations, and scale means, standard deviations, and standardized Cronbach coefficient alphas were determined in conjunction with data screening; and (e) a hierarchical regression analysis—with SDT's relative autonomy index entered first, TPB's attitude, subjective norm, and perceived behavioural control entered second, and LCT's anticipated constraint and anticipated constraint negotiation entered last (as per Cohen and colleagues', 2003, recommendation on entering blocks of regressors from most distal to most proximal)—was conducted.

4. Results

4.1 Socio-Demographic Characteristics

Participants were largely in the 45 to 64 age category (41.3%), married or with a partner (64.2%), and had either completed a certificate/diploma at a community college or technical school (23.5%) or had completed an undergraduate or advanced university degree (31.6%). Most were either employed full-time (48.7%) or retired (26.5%), and had income levels either between \$50,000 and \$100,000 Canadian (35.3%) or over \$100,000 Canadian (41.0%).

4.2 Descriptive Data

Scale standardized coefficient alphas were all near or above accepted levels (Nunnally, 1967; Schmitt, 1996), with the exception of the PBC scale (.19). As a result, it was decided to

use only the personal control item in all further analyses. Data screening indicated that the anticipated interpersonal and anticipated structural constraint scales were highly correlated (.85). Thus, following Tabachnick and Fidell's (2007) recommendation regarding singularity and multicollinearity, the two scales were combined. Though 356 participants' had all of the required data for the planned hierarchical regression, two individuals were dropped as a result of further data screening. Table 1 reports the subsequent scale means, standard deviations, and correlations.

Table 1
Scale Means, Standard Deviations, and Correlations

Scale	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7
1. Intention	3.34	10.34	---	.23**	.26**	.23**	-.19*	.34**	.37**
2. Autonomy	3.21	2.94		---	.57**	.44**	.01	.40**	.35**
3. Attitude	2.92	0.80			---	.53**	.01	.36**	.31**
4. Norm	2.81	0.98				---	-.08	.45**	.40**
5. Control	4.57	0.74					---	-.18*	-.22**
6. Constraint	1.45	0.76						---	.83
7. Negotiation	1.29	0.53							---
Notes:	<i>N</i> =354	* <.001	** <.0001						

4.2 Hierarchical Regression Analysis Results

Results of a hierarchical regression analysis predicting frequency of intention to casino gamble in the next six months—with SDT's relative autonomy index entered first, TPB's attitude, subjective norm, and PBC's personal control item entered second, and anticipated

intrapersonal/structural constraint and anticipated constraint negotiation entered third—are reported in Table 2. Changes in R^2 (as per Tabachnick and Fidell, 2007) indicated that, at Step 2, while RAI was no longer significant once attitude and personal control were added, the addition of these two variables significantly improved the ability to predict casino gambling intentions. Moreover, at Step 3, attitude, personal control, and anticipated constraint negotiation were all significant, and the addition of the last variable further improved predictive ability.

Table 2

Hierarchical Regression Analysis Predicting Frequency of Intention to Casino Gamble

Predictor(s)	β^1	β^2	β^3	R^2	ΔR^2
Step 1				.05	
Autonomy	0.74***	0.35	0.14		
Step 2				.12	.07****
Attitude		1.90*	1.71*		
Norm		1.09	0.28		
Control		-2.53***	-1.74*		
Step 3				.18	.06****
Constraint			0.38		
Negotiation			4.97**		
Notes:	$N=354$	* <.05	** <.1	*** <.001	**** <.0001

5. Discussion and Conclusion

This study's results are both congruent with Hagger *et al.* (2006) and Hagger and Chatzisarantis' (2009) findings as well as supportive of broadening their multi-theory framework. In terms of the former, for example, these researchers found that motivations usually acted indirectly rather than directly on intention. This too appears to be the case in the current study as once attitude, subjective norm, and personal control were added RAI no longer had a significant effect on intention—which further suggests that the sequencing put forth by Hagger *et al.* is correct. They also found that while SN did not always affect intention PBC did; and the results of this study are congruent with this outcome with one important exception. Specifically, in contrast with their diet-, exercise-, and health-focused studies, PBC had a negative rather than positive effect on casino gambling intentions. Potential explanations for this dissimilarity include: (a) it is a function of having only included personal control; (b) personal control is perceived in terms of *not* intending to gamble; or (c) both. The last may in fact be accurate as another TPB study (Walker *et al.*, 2006) found that personal control negatively affected Chinese-Canadian females' intention to play the lottery whereas self-efficacy had no significant effect.

In terms of the latter, because the addition of anticipated constraint negotiation improved ability to predict intention to casino gamble above and beyond RAI, attitude, SN, and personal control, a provisional case can be made for including it in Hagger's *et al.* (2006) multi-theory framework. This type of theoretical augmentation has in fact been explicitly endorsed elsewhere, with Ajzen (1991) for instance stating that:

The theory of planned behavior is, in principle, open to the inclusion of additional predictors if it can be shown that they capture a significant proportion of variance in intention of behavior after the theory's current variables have been taken into account. (p. 199)

But theory augmentation and theory incorporation are not the same thing; and so the issue remains as to whether anticipated leisure constraints specifically and leisure constraints theory more generally should also be considered for inclusion in Hagger's *et al.* (2006) extant framework. In both cases I am of the opinion that the answer is yes, because: (a) a *post hoc*

hierarchical regression wherein anticipated constraint alone was entered after RAI, attitude, SN, and personal control was significant which, when viewed together with the information outlined earlier, suggests that the sequencing of this variable and anticipated constraint negotiation (as shown in Figure 1) is likely correct; and (b) the majority of LCT-based research has focused not on anticipation but rather on realization; that is, how interpersonal and structural constraints are experienced *after* preferences/intentions develop but *before* actual behaviour occurs, as well as how in actuality these barriers are negotiated. Thus, it appears that there is still much that could be gained by conducting future research on incorporating LCT into Hagger's *et al.* synthesis.

Future research may also be able to overcome some issues associated with the current study. For example, the predictive ability of the TPB variables was much lower than that found elsewhere (e.g., Armitage and Conner, 2001). As well, while casino gambling is an increasingly popular leisure activity in Asia, Europe, and North America, and one that is available in (e.g., Egypt), or near (i.e., on tourist ships just outside the UAE's territorial waters; Baldwin and Al Amir, 2010), some Arab states, the generalizability of this study's results in regard to other activities and/or for other cultural group members should not be assumed. Related to the former, some might argue that leisure constraints theory is, by definition, too limited to be incorporated into any framework that seeks to explain and predict human behaviour more broadly, unitarily, or grandly. I would argue, however, that while leisure scholars may be ahead in having identified the constraints people face and the solutions they select to overcome them, neither constraints nor negotiation strategies are inherently nor exclusively leisure-specific. Moreover, by trying to integrate LCT into more broad, unitary, and grand frameworks, leisure scholars could also potentially address their own "theory shyness" (Kruglanski, 2001). As Crawford and Jackson (2005) recognized:

We may ultimately come to the realization that one of the major issues this line of work faces is not that it has been too brazen, but that it may not have been adventurous enough. Why not be daring and speculate imaginatively now, at this relatively early stage? (p. 165)

In leisure studies as in the social sciences generally, therefore, it seems the time for "theory boldness" may finally be at hand.

6. References

- Ajzen, I. (1991) The theory of planned behavior, *Organisational Behavior and Human Decision Process*, **50**, 179-211.
- Ajzen, I. (2002) *Constructing a TpB questionnaire: Conceptual and methodological considerations*. Available at <http://www-unix.oit.umass.edu/~ajzen/pdf/tpb.measurement.pdf> (accessed 25 February 25, 2003).
- Armitage, C. and Connor, M. (2001) Efficacy of the Theory of Planned Behaviour: A meta-analytic review, *British Journal of Social Psychology*, **40**, 471-499.
- Baldwin, D. and Al Amir, S. (2010, January 21) High seas, high stakes. *Gulfnews.com*. Available at <http://gulfnews.com/news/gulf/uae/high-seas-high-stakes-1.571057> (accessed 7 February 2011).
- Chantal, Y., Vallerand, R. and Vallieres, E. (1994) Construction et validation de l'Echelle de motivation relative aux jeux de hazard et d'argent, *Loisir & Societe*, **17**, 189-212. Scale description available at www.er.uqam.ca/nobel/r26710/LRLS/scales/emjha_en.doc (accessed 1 April 2008).
- Cohen, J., Cohen, P., West, S. G. and Aiken, L. S. (2003) *Applied multiple regression/correlational analysis for the behavioral sciences*, Lawrence Erlbaum Associates, Mahwah, NJ:.
- Crawford, D. and Godbey, G. (1987) Reconceptualizing barriers to family leisure, *Leisure Sciences*, **9**, 119-127.
- Crawford, D., Jackson, E. and Godbey, G. (1991) A hierarchical model of leisure constraints, *Leisure Sciences*, **13**, 309-320.
- Crawford, D. and Jackson, E. (2005) Leisure constraints theory: Dimensions, directions, and dilemmas, in *Constraints to leisure*, (Ed) E. Jackson, Venture Publishing, State College, PA, pp. 153-167.
- Deci, E. and Ryan, R. (1985) *Intrinsic motivation and self-determination in human behavior*. New York: Plenum Press.
- Fiske, S.T. (2004) Mind the gap: In praise of informal sources of formal theory, *Personality and Social Psychology Review*, **8**, 132-137.

- Gleicher, F., Boninger, D., Strathman, A., Armor, D., Hetts, J. and Ahn, M. (1995) With an eye toward the future: The impact of counterfactual thinking on affect, attitudes, and behavior. In *What might have been: The social psychology of counterfactual thinking*, (Eds) N. Roesse and J. Olson), Lawrence Erlbaum Associates, Hillsdale, NJ, pp. 284-304.
- Grolnick, W. and Ryan, R. (1987) Autonomy in children's learning: An experimental and individual difference investigation, *Journal of Personality and Social Psychology*, **52**, 890-898.
- Hagger, M., Chatzisarantis, N. and Harris, J. (2006) From psychological need satisfaction to intentional behavior: Testing a motivational sequence in two behavioral contexts, *Personality and Social Psychology Bulletin*, **32**, 131-148.
- Hagger, M. and Chatzisarantis, N. (2009) Integrating the theory of planned behaviour and self-determination theory in health behaviour: A meta-analysis, *British Journal of Health Psychology*, **14**, 275-302.
- Jackson, E. (2000). Will research on leisure constraints still be relevant in the twenty-first century?, *Journal of Leisure Research*, **32**, 62-68.
- Jackson, E., Crawford, D. and Godbey, G. (1993) Negotiation of leisure constraints, *Leisure Sciences*, **15**, 1-11.
- Kleiber, D., Walker, G. J. and Mannell, R. (2011) *A social psychology of leisure*, 2nd edition, Venture Publishing, State College, PA.
- Kruglanski, A. (2001) That "vision thing": The state of theory in social and personality psychology at the edge of the new millennium, *Journal of Personality and Social Psychology*, **80**, 871-875.
- Merton, R. (1968) *Social theory and social structure*, Free Press, New York.
- Nunnally, J. C. (1967) *Psychometric theory*, 1st edition, McGraw-Hill, New York.
- Popper, K. (1959) *The logic of scientific discovery*, Harper, New York. (Original work published as *Logik der Forschung*, 1935)
- Ryan, R. and Deci, E. (2000) Self-Determination Theory and the facilitation of intrinsic motivation, social development, & well-being, *American Psychologist*, **55**, 68-78.
- Schmitt, N. (1996) Uses and abuses of coefficient alpha, *Psychological Assessment*, **8**, 350-353.
- Sheeran, P. and Orbell, S. (1999) Augmenting the theory of planned behavior: Roles for regret and descriptive norms, *Journal of Applied Social Psychology*, **29**, 2107-2142.

- Tabachnick, B. and Fidell, L. (2007) *Using multivariate statistics*, 5th edition, Pearson, Boston.
- Vallerand, R. (1997) Towards a hierarchical model of intrinsic and extrinsic motivation. In M. Zanna (Ed.), *Advances in experimental psychology* (pp.271-359). New York: Academic Press.
- Wacker, J. (1998) A definition of theory: Research guidelines for different theory-building research methods in operations management, *Journal of Operations Management*, 16, 361-385.
- Walker, G. J., Courneya, K. S. and Deng, J. (2006) Ethnicity, gender, and the theory of planned behavior: The case of playing the lottery, *Journal of Leisure Research*, 38, 224-248.
- Walker, G. J., Jackson, E. L. and Deng, J. (2007) Culture and leisure constraints: A comparison of Canadian and Mainland Chinese university students, *Journal of Leisure Research*, 39, 567-590.