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Personal projects analysis: Opportunities and implications for multiple goal assessment, theoretical integration, and behaviour change

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Much of our behaviour acts in service of pursuing our goals (Carver & Scheier, 1998). However, research into goal pursuit has mostly focused upon the study of single isolated health goals and behaviours. As Gebhardt (this issue) discusses, life is more complex; people pursue multiple goals via numerous behaviours (health related and not), which all potentially compete for limited resources. Further investigation is needed using multiple goal approaches that account for this complexity. This thought piece describes a comprehensive unit of analysis and an associated methodological framework for conducting research on multiple goals, and provides suggestions for its potential application in health psychology.

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Goal systems – Health behaviour as a means to an end

The health behaviours we promote (e.g. 'physical activity') do not occur in isolation. They are but one of many behaviours we engage in, most (if not all) of which act in service of goals that we pursue. In considering not only additional health behaviours but behaviours from other life domains (e.g. empty the rubbish bin, commute to work, email friends) we can quickly appreciate the complexity and idiosyncrasies of an individual's goal system. While considered in greater detail elsewhere (e.g. Carver & Scheier, 1998; Kruglanski, Shah, Fishbach, Friedman, Chun, & Sleeth-Keppler, 2002), for illustrative purposes let us briefly explore the hierarchical nature of a goal system using an example behaviour, 'engaging in physical activity on at least 5 days a week for at least 30 mins'. This behaviour can be conceived as a means of pursuing a goal of 'being regularly physically active'. In turn, this goal might be associated with a higher goal of 'being fit', and another of 'losing weight'. These in turn might be associated with a higher-level goal of 'preventing disease' and/or a goal of 'attracting a significant other', which finally may lead to a highest level goal of 'being happy'. A single behaviour can therefore be conceptualised as embedded within a vertical hierarchical chain with potential horizontal branches at each level, with all other goal-directed behaviours engaged in (health-related or not) having an associated hierarchical structure. This structural interconnectedness of the goal system highlights the competitive nature of goal pursuit, where limited resources (cognitive, Kruglanski et al, 2002; time, energy, money, Riediger & Freund, 2004) foster varying levels of between-goal conflict and facilitation. With respect to physical activity, evidence suggests that differences in exercise frequency can be attributed to goal conflict (Gebhardt & Maes, 1998) and that goal facilitation is predictive of exercise frequency (Riediger & Freund, 2004).

If the other goals pursued in a goal system have an impact on individual behaviours, what are the implications for evidence from research focusing on the behaviour level of the goal hierarchy? For instance, research testing social cognition models suggests a reliable relationship between motivation and behaviour. However, increased recognition that motivation may be necessary but not always sufficient (e.g. 'inclined abstainers'; Orbell & Sheeran, 1998) in determining and changing behaviour has led to research on post-intentional volition-based strategies aimed at increasing the likelihood that intentions be translated into behaviour (e.g. action and coping plans; Sniehotta, Scholz, & Schwarzer, 2006). What impact does goal conflict and facilitation have on health behaviour in either ►

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the motivational or volitional phases of behaviour change? A methodological framework that can cope with the complexity of integrating goal-directed behaviour and multiple goal pursuit would aid in addressing this sort of question.

A construct and a method for multiple behaviour assessment and change

Little (1983) conceived a goal-directed action unit – the *personal project* – and developed, tested and refined an open-ended methodology for eliciting, rating, and comparing these units: *personal projects analysis* (PPA). A personal project can represent either a means to an end or an end in itself, where both are representations of what characterises an individual's salient pursuits; they are extended in time, inherently volitional, and contextually embedded within the person's life. Personal projects have been formally defined as "extended sets of personally salient action in context" (Little, 2007, p.25). They are our "real life goals" (Karoly, 1993, p.275); the idiosyncratic pursuits that define our everyday lives and are meant to represent the full range – both horizontal and vertical – of the goal hierarchy/system.

PPA is a flexible, open-ended series of assessment modules used to elicit, rate and compare personal projects. Typically (though inherently not necessarily), PPA consists of an initial elicitation stage where participants are asked to list the personal projects that represent what they are currently pursuing in as many life contexts as the individual deems to be characteristic (e.g. school, work, family, interpersonal, intrapersonal). Participants then narrow their list to (usually, though not necessarily) 10 projects and rate each on a number of dimensions that are of interest to the researcher, e.g. importance, difficulty, stress, support, effort. PPA provides a list of predefined dimensions which robustly load onto 5 factors: project meaning, structure, community, efficacy, and stress (Little & Gee, 2007), but the open-ended nature of PPA explicitly encourages researchers to add or remove dimensions according to their research interests (see Figure 1). The resulting ratings on each dimension can be aggregated to form goal system-level constructs which can be compared between participants and used in predictive analyses. For example, ratings of importance can be averaged across all elicited projects to form an overall importance score, or alternatively importance of a focal project of interest (e.g. health-related) can be compared relative to all other projects. In short, it provides both normative and idiographic levels of analysis.

The assessment of each project's impact on each other (i.e. their cross-impact) is another PPA rating module that is particularly relevant to this multiple ►

What do you think about your Personal Projects?

Please rate each project below on a **scale of 0 to 10** on the series of dimensions listed above them.

** When you're finished rating your projects, please click the next tab entitled "Project Conflict" **

Place your mouse over each dimension for → Personal Projects		Importance	Enjoyment	Difficulty	Visibility	Control	Initiation	Stress	Time Adequacy	Likelihood of Success	Self Identity	Other's View	Value Consistency	Progress	Effort	Absorption	Support	Other's Approval	Intention	Autonomy	Helps Physical Activity	Helps Studying
1	Participate in regular physical activity	6	6	4	9	8	9	2	5	7	3	9	7	5	7	9	7	10	7	9		2
2	Regularly study before / after class for my uni courses	8	5	6	3	8	10	5	1	6	7	10	7	2	6	8	9	9	8	7	0	
3	Save up for vacation	7	3	8	1	6	7	5	4	8	2	6	7	4	7	3	6	8	9	8	0	3
4	See friends	9	10	2	10	4	8	1	2	10	9	9	10	9	6	10	8	8	10	10	7	4
5	Support my football team	8	9	2	8	8	7	10	5	9	10	9	10	9	4	10	9	8	9	10	4	0
6	Plan and complete essays	6	4	6	7	7	9	7	2	8	6	7	8	5	5	10	3	9	8	7	3	10
7	Keep my room tidy	2	0	6	9	10	9	3	8	3	1	7	2	1	3	3	1	7	7	9	4	5
8	Play 18 holes of golf	4	7	5	7	7	5	0	8	4	7	2	5	4	3	10	8	6	8	10	10	0
9	Try to meet new people	6	7	5	5	5	9	10	2	1	1	9	5	3	5	7	5	8	9	10	8	0
10	Practice for my driving test	3	3	3	5	6	7	7	4	9	2	9	2	6	8	8	7	10	9	6	3	0

Figure 1: Standard and ad-hoc dimensions rated for elicited personal projects (adapted with permission from Little, 1983)

Personal projects analysis (cont'd)

goals discussion. Using a matrix composed of participants' personal projects, participants rate the extent that, for instance Project 1 (e.g. participate in physical activity) impacts in a facilitative or conflicting way with each other project, and so on for all projects. The resulting matrix of inter-goal relations can be used to identify a) particular constellations of conflict, facilitation, and independence, b) the overall conflicting and facilitating impact of the other projects upon a particular project, or c) a general indicator of overall system conflict and facilitation. Riediger (2007) highlighted the distinctive nature of goal conflict and goal facilitation as two independent constructs, and further conceptualises the ways in which goals may conflict with or facilitate each other. A closely related module, the joint cross-impact matrix, explores how an individuals' projects impact on those of other individuals. Given the importance of emotional support in project pursuit, this module may be of particular interest. Electively, additional modules can be added (see Little & Gee, 2007).

With these modules, idiosyncratic goal systems can be elicited and assessed on a series of relevant dimensions, and the helpful and/or hindering impact that pursuit of each goal has on the pursuit of each other goal, and those of others, can be determined.

PPA as a means for theoretical integration

Personal Projects Analysis provides a common and comprehensive assessment tool for testing and integrating theories that are usually applied to single behaviours and goals. While a standard set of 17 dimensions is typically used to assess the elicited personal projects, the methodology is entirely open-ended and can include any additional (or remove any non-essential) dimensions to fit the research question. For instance, PPA can be used to test a multiple behaviours version of the Theory of Planned Behaviour (TPB) by including the dimensions of attitude, subjective norm, perceived behavioural control and intention, which could be assessed for each elicited personal project. Theoretical integration efforts can be tested within a multiple goals approach by for example integrating volitional constructs with the motivational constructs in the TPB via assessment of 'where', 'with whom', and 'how' each project is pursued. Personal projects are the linchpin of a social ecological model of human development, in which biological, cultural and emergent choice behaviour are integrated, which make their use in theoretical integration efforts particularly relevant.

Behaviour change interventions based on Personal Projects Analysis

While much of our behaviour is goal directed, the ebb and flow of daily life is such that the probability that we are consciously aware of the pursuit of all our goals at all times is likely to be low (Gebhardt, this issue). A static graphical representation of the hierarchical goal structure does not convey the inherently dynamic nature of the self-regulation of multiple goal pursuit. The relations between our goals, be they conflicting or facilitating, may therefore not always be obvious or accessible (aside from *in situ* circumstances when critical choices of pursuit of one goal over another are made). The process of listing one's personal projects, rating them on a series of dimensions, and assessing the extent that each conflicts with and/or facilitates the others provides the opportunity of considering the various pursuits of one's life all at once. This in itself may provide a basis for a behaviour change intervention, but has yet to be tested formally.

PPA may also be used for reducing goal conflict and enhancing goal facilitation. Returning to contemporary efforts in health psychology for promoting the enactment of high intentions into behaviour, planning strategies have been shown to be particularly successful in promoting the enactment of motivation (Gollwitzer & Sheeran, 2006). Eliciting personal projects and rating the extent to which they impact on each other necessarily increases the salience of the goal system for the individual, which may assist in increasing the potential for formation of relevant and effective plans. For example, coping plans are post-intentional planning cognitions that involve a) identifying potential barriers to the pursuit of a focal goal and b) *a priori* planning of behavioural or cognitive self-regulatory responses to prioritise the focal goal if/when the identified barriers present themselves (Sniehotta et al., 2006). While much attention has been paid to b), comparatively less attention has focused on the means of identifying and anticipating potential barriers to focal goal pursuit. Rather, it is often assumed that the individual can readily identify and anticipate these barriers. However (and particularly in brief interventions with more passive modes of delivery – e.g. web-based), this assumption may not be tenable. Methodologies such as PPA, which ask participants to list out their own personally salient personal projects, rate them along a number of dimensions, and assess the conflicting and facilitating impact that pursuit of ►

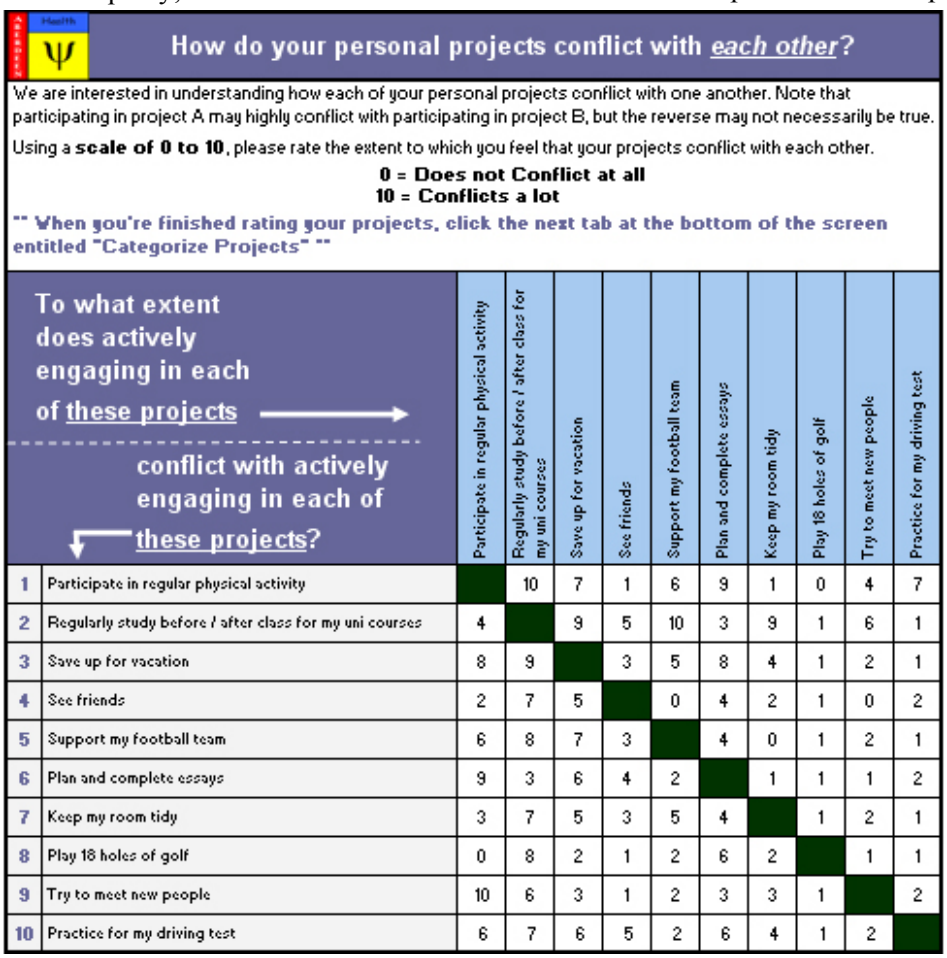
Personal projects analysis (cont'd)

each has on the pursuit of each other, may render the identification of potential barriers more salient. In particular, assessment of the impact that other salient goals have on a particular goal provides an indication of whether any of the other goals being pursued may either interfere with pursuit of the focal goal (see Figure 2). Upon identification of particularly conflicting goal combinations, a specific self-regulatory response may be prospectively planned to cope with instances when such conflict may prevent the enactment of the focal goal. Among these, goal facilitation planning (Darker, French, Eves, & Sniehotta, submitted) may complement the identification of conflicting goals. If a particular goal combination is deemed to be conflicting, the identification of goals which facilitate the pursuit of the focal goal may provide an additional self-regulatory means of minimising goal conflict. This would account for the wider goal system and valorise the pursuit of not only the focal goal but also additional goals in the goal system. The prospective planning of facilitative goal pursuit may therefore provide an additional means of coping with identified barriers. It should be noted that all goals are not valued equally, and therefore even a minimum amount of conflict or facilitation with a vital, core project is likely to have important implications for enactment of a focal goal (Little, 2007).

A flexible method for addressing focused research questions

PPA typically encompasses the pursuit of all relevant personal projects spanning the range of an individual's experience. It has been applied to not only promotion-based health behaviours (e.g. exercise) but also to explore how illness (e.g. cancer) impacts on project systems (Peterman & Lecci, 2007). However, when the interest is in identifying whether the pursuit of other goals impacts on a focal goal, constraining the setting to only contexts in which the focal goal is pursued may prove useful.

Personal Projects Analysis provides a flexible methodological foundation for incorporating the impact that the goal system has on enactment of particular health behaviours by using an integrative unit of analysis (the personal project) and taking into consideration the pursuit of multiple goals. As ►



How do your personal projects conflict with *each other*?

We are interested in understanding how each of your personal projects conflict with one another. Note that participating in project A may highly conflict with participating in project B, but the reverse may not necessarily be true.

Using a **scale of 0 to 10**, please rate the extent to which you feel that your projects conflict with each other.

0 = Does not Conflict at all
10 = Conflicts a lot

** When you're finished rating your projects, click the next tab at the bottom of the screen entitled "Categorize Projects" **

To what extent does actively engaging in each of these projects → / conflict with actively engaging in each of these projects? ↓	Participate in regular physical activity	Regularly study before / after class for my uni courses	Save up for vacation	See friends	Support my football team	Plan and complete essays	Keep my room tidy	Play 18 holes of golf	Try to meet new people	Practice for my driving test
1 Participate in regular physical activity		10	7	1	6	9	1	0	4	7
2 Regularly study before / after class for my uni courses	4		9	5	10	3	9	1	6	1
3 Save up for vacation	8	9		3	5	8	4	1	2	1
4 See friends	2	7	5		0	4	2	1	0	2
5 Support my football team	6	8	7	3		4	0	1	2	1
6 Plan and complete essays	9	3	6	4	2		1	1	1	2
7 Keep my room tidy	3	7	5	3	5	4		1	2	1
8 Play 18 holes of golf	0	8	2	1	2	6	2		1	1
9 Try to meet new people	10	6	3	1	2	3	3	1		2
10 Practice for my driving test	6	7	6	5	2	6	4	1	2	

Figure 2: Matrix assessing goal conflict (adapted with permission from Little, 1983)

Personal projects analysis (cont'd)

effective, replicable, and generalisable health behaviour change remains a priority for the field, we recommend mobilising research efforts beyond the theoretical and methodological consideration of single isolated behaviour. Tools such as PPA can foster new and exciting avenues of theory testing and integration which may have implications for explaining and predicting behaviour, and ultimately for the design and delivery of behaviour change interventions. ■

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