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Tribute to Martin Lee

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MOTIVATION AND ACHIEVEMENT GOALS:

After 25 years, where are we, where are we going?⁽¹⁾

1. Introduction

In 1978, those of us in the Institute for Child Behaviour and Development at the Children's Research Center of the University of Illinois (John Nicholls, Marty Maehr, Carole Dweck, Carol Ames, Russ Ames, Ken Hill, Carol Farmer, and myself) decided to have a seminar series in the Spring to talk about our individual research thrusts into motivation processes. It was John Nicholls's idea not to have our graduate students present so that we could say "silly things without worrying about what our students will think". Each of us chatted about our research data and ideas and where we were going in the future. It was John Nicholls who first introduced us to the concepts that we now recognize as integral to achievement goal theory-ego and task involvement. John presented his ideas about having equality of motivation through task involvement and the ideas eventually became a publication in the *American Psychologist* (Nicholls, 1979). We all had our input, and gave our ideas. It was the most stimulating and exciting academic experience of my life. It reflects something in science that we often fail to recognize, but experience all the time-serendipity! For me, it was serendipitous that I was a colleague of these scientists at that place and time at Illinois. It was serendipitous that all these young scientists (with the exception of Marty Maehr, who may disagree with my categorization!) were at the same University at the same time. That seminar series changed the research of all of us involved and directly led to the first article where the concepts were first introduced in the form that we would recognize today (Maehr & Nicholls, 1980). We all became achievement goal people in one form or another after that seminar series. Each of us who were there has acknowledged the importance of the seminar in the development of achievement goal theory. We all

⁽¹⁾ Portions of this paper have been drawn from an upcoming chapter in the *Handbook of Sport Psychology* where the author was the first author: Roberts, G.C., Treasure, D.C. & Conroy, D. (2007). Understanding the Dynamics of Motivation in Sport and Physical Activity: An Achievement Goal Interpretation. In G. Tenenbaum & R. Ecklund (Eds). *Handbook of Sport Psychology* (p. 3-30). NY: Wiley.

contributed, some more than others, but the intellectual leader for achievement goal theory, in my opinion, was clearly John Nicholls.

My own research was changed (from causal attribution work) and I became an achievement goal researcher from that point in time. I immediately set about preaching the gospel of achievement goals to my own doctoral students to conduct research in the area. Indeed, the first ever research study conducted in achievement goal theory per se (unpublished unfortunately) was by a doctoral student of mine in sport psychology, Martha Ewing (1981). And another of my students at the time totally embraced achievement goals and for her dissertation did a study using achievement goal concepts in a cultural context (Duda, 1981), and has since become a research superstar in achievement goals. Rather than following the pack in psychology as is usually the case in sport psychology research, sport psychologists were in the forefront in conducting research on achievement goals.

The first publications using achievement goal theory in sport were in 1981, mostly from the University of Illinois. Since then, there are over 200 refereed publications in sport psychology (Roberts, Treasure & Conroy, 2007). Motivation papers in congresses of sport and exercise psychology over the past 20 years have been hugely biased in favour of constructs emanating from achievement goal theory. However, Self Determination theory research is becoming popular these days.

So, how do we define the process of motivation from an achievement goal perspective? Motivational processes can be defined by the psychological constructs that *energize, direct and regulate* achievement behaviour. Motivation theories are on a continuum ranging from deterministic to cognitive. Deterministic and mechanistic theories view humans as being passive and driven by psychological needs and/or drives. Organismic theories include innate needs but also recognize that dialectic occurs between the organism and the social context. Cognitive theories view humans as being active and initiating action through subjective interpretation of the achievement context. Achievement goal theory is a social cognitive theory based on dynamic and sophisticated conceptions that assume the human is an active participant in decision making and in planning achievement behaviour (e.g., Maehr & Nicholls, 1980; Nicholls, 1989).

2. Achievement Goal Theory in Sport and Physical Activity

Achievement goal theory has been reviewed in several publications (e.g., Duda, 2005; Duda & Hall, 2001; Roberts, 2001; Roberts *et al.*, 2007), so the present paper will briefly review the basic tenets to facilitate the discussion later in the paper. Achievement goal theory assumes that the individual is an intentional, goal-directed organism that operates in a rational manner, and that achievement goals govern achievement beliefs and guide subsequent decision making and behaviour in achievement contexts (see Roberts, 2001). It is argued that in order to understand the motivation of individuals, the function and meaning of the achievement behaviour to the individual must be taken into account, and the goal of action understood. Individuals give meaning to their achievement behaviour through the goals they adopt. It is these goals that reflect the purposes of achievement striving. Once adopted, the achievement goal determines the integrated pattern of beliefs that undergird approach and avoid strategies, the differing engagement levels, and the differing responses to achievement outcomes.

An individual will approach a task or activity with certain goals of action reflecting his/her personal perceptions and beliefs about the particular achievement activity in which he/she is engaged and the form of ability he/she wishes to demonstrate (Nicholls, 1989). The conception of ability employed, and the ways performance is interpreted can be understood in terms of these perceptions and beliefs. These perceptions and beliefs form a *personal theory of achievement* at the activity (Nicholls, 1989; Roberts, *et al*, 2007; Roberts, 2001), which reflects the individual's perception of how things work in achievement situations. Therefore, people will differ in which of the conceptions of ability and criteria of success and failure they use, and in how they use them, based on their personal theory of achievement.

There are two conceptions of ability that have become popular in motivation research. They have become the source of the criteria by which individuals assess success and failure. The goals of action are to meet the criteria by which success and failure are assessed. Nicholls identifies achievement behaviour as being *task involved* or as being *ego involved*. When task involved, the goal of action is to develop mastery, improvement, or learning and the demonstration of ability is self-referenced. Success is realized when mastery or improvement has been attained. The goal of action for an ego-involved individual, on the other hand, is to demonstrate ability relative to others, or to outperform others, making ability other-referenced. Success is realized when the performance of others is exceeded, especially when expending less effort than others (Nicholls, 1984, 1989).

In this paper, when we refer to the motivated state of involvement of the individual, we use the terms ego and task involvement to be consistent with Nicholls's use of the terms. In addition, when we refer to individual differences (e.g., self-schemas, personal theories of achievement, dispositions), we use the terms *task* and *ego orientation*. Other motivation theorists (e.g., Dweck, 1986; Elliot, 1997; Maehr & Braskamp, 1986) have used different terms to describe the same phenomena. When we refer to the situational determinants of motivation, to the achievement cues inherent within the context, and to the cognitive schemas emerging from achievement situations, we will be consistent with Ames (1992) and refer to the task involving aspect of the context as *mastery* criteria and the ego involving aspect of the context as *performance* criteria. Finally, when we refer to the competence goals defined by Elliot and colleagues (e.g., Elliot, 1997), we use the terms *mastery* and *performance* goals.

3. The Future of Achievement Goals?

3.1. *The hierarchical model of achievement goals*

There are two major trends in the research using achievement goals. One major trend in achievement goal research has been the attempt to expand the theory into a larger conceptual framework (e.g., Maehr & Braskamp, 1986). One of the most provocative attempts at revising and extending achievement goal theory in the past decade has emerged from work on the hierarchical model of achievement motivation (e.g., Elliot, 1999). Elliot and colleagues (e.g., 2005) have integrated achievement goal theory with more traditional concepts of achievement approach and avoid needs. The

argument is that achievement goals should consider both the *definition of competence* and the *valence of the striving*. The two definitions of competence (i.e., mastery/task vs. performance/ego) and two valences of strivings (i.e., approaching competence vs. avoiding incompetence) yield a 2x2 model of achievement goals comprising mastery approach, mastery avoidance, performance approach, and performance avoidance goals. The hierarchical model differentiates goals based on their valence or the degree to which the focal outcome is pleasant or unpleasant. The argument is that achievement goals should consider both the definition of competence and the valence of the striving. It is assumed that the goals are the manifestation of "needs", or at least the "motivational surrogates", as Elliot and Church (1997) state, of the needs of achievement motivation (approach) and of the fear of failure (avoid). This suggests that achievement goals are based on the satisfaction of approach and avoid needs that are evoked by situational cues. There is much data supporting the hierarchical model, but I am suggesting in this chapter that the data is not as convincing as some researchers suggest (e.g., Conroy *et al*, 2003), and that hierarchical model proponents ignore fundamental tenets of the original theory.

3.2. Hierarchical motivation: An extension, or another theory?

The introduction of the hierarchical model has challenged many of the tenets and underlying assumptions of what may be referred to as traditional achievement goal theory. One of the most important challenges and differences between the respective perspectives pertains to the energisation of the motivational process. As we have noted above, the hierarchical model differentiates goals based on both the definition of competence (a similarity, but not identical to competence being considered as a conception) and on their valence or the degree to which the focal outcome is pleasant or unpleasant (a difference between the models). I argue that in the hierarchical model we seem to be defining achievement goals as discrete goals based upon a definition of competence and strategies aimed at fulfilling some particular objective. In the hierarchical model, goals are mid level constructs that mediate the effects of a host of individual differences (e.g., achievement motives, self-perceptions, relational variables, demographic characteristics, neurophysiologic predispositions) and situational factors (e.g., norm-based evaluation) on specific motivated behaviours and serve as proximal predictors of achievement related processes and outcomes (Elliot, 1999). But it is the appetitive (approach) and aversive (avoid) valence of competence striving that energizes the motivational process. It is assumed that the goals are the manifestation of "needs". This suggests that achievement goals represent approaches to self-regulation based on satisfying approach and avoid needs that are evoked by situational cues.

We have briefly discussed traditional achievement goal theory earlier, and it is clear that it is the goals themselves that are considered to be the critical determinants of achievement cognition, affect and behaviour. It is the goals that give meaning to the investment of personal resources because they reflect the purposes underlying achievement actions in achievement contexts. Once endorsed, the goal defines an integrated pattern of beliefs, attributions, and affect that underlie approach and avoid strategies, different levels of engagement, and the different responses to achievement outcomes (Kaplan & Maehr, 2002; Roberts *et al*, 2007). Achievement goals refer to

achievement-oriented or achievement-directed behaviour where "success" is the goal. Nicholls (1989) argued that these beliefs and perceptions form a personal theory of achievement in the activity that drives the achievement process, and that a conceptually coherent pattern of relationships should therefore exist between an individual's achievement goals (the subjective meaning of success) and his or her achievement striving. In the achievement goal approach, it is not how one defines competence with its attendant valence; it is how one defines success and the *meaning* of developing and/or demonstrating competence. Thus, the hierarchical approach presents energizing constructs that are different to the hierarchical model, and is clearly not an extension of achievement goal theory as claimed (e.g., Conroy *et al.*, 2003).

One other conceptual difference has emerged from the development of measures for the hierarchical model. Duda (2005) has argued that because the interrelationships between the performance-approach, mastery-avoidance and performance-avoidance goals is low to moderate (e.g., Conroy *et al.*, 2003), and only the mastery-approach and performance-avoidance goals have demonstrated independence, then this creates conceptual problems for the hierarchical approach. What are the expected relationships between the goals? Should they demonstrate greater independence to be recognized as extending the range of goals? And how does this relate to the evidence that task and ego goals have been demonstrated to be orthogonal in the traditional achievement goal approach? These aspects are ignored by the proponents of the hierarchical model.

In addition, as I have argued elsewhere (Roberts *et al.*, 2007), there is evidence that the hierarchical model may have different assumptions underlying performance approach and avoidance goals. Performance approach tendencies may be based on defining competence in normative terms, but recent research has suggested that performance avoidance may be based on one of three facets; impression management - that of "saving face" as Skaalvik (1997) argues, a focus to avoid demonstrating low ability (Middleton & Midgeley, 1997), or a fear of failure as argued by Elliot (e.g., Elliot & Church, 1997). A recent study illustrates this where Smith, Duda, Allen and Hall (2002) wished to determine whether the different measures used were measuring the same constructs. They found that impression management (Skaalvik) explained the most variance (40%), with fear of failure (Elliot & Church) and avoiding demonstrating low ability (Middleton & Midgeley) only explaining 9.4% and 8% of the variance respectively. Given the findings of Smith and colleagues (2002), perhaps it is more important for performance avoid people to protect self esteem (save face) rather than being motivated to avoid failing. Does protecting self worth have a greater role to play than avoiding failure?

Similar arguments may be made for mastery avoidance goals. These goals involve focusing on not making mistakes or not doing worse than a previous performance. According to Conroy *et al.* (2003), mastery avoidance combines a desirable definition of competence with an undesirable focus on avoiding incompetence. It must be confessed that little is known of these goals as yet. With the traditional achievement goal approach, it is conceptually inconsistent to have a mastery, or task involved goal with a focus on avoiding appearing incompetent. What may cause mastery avoidance is that a mastery/task person may also be ego involved in the task? Achievement goal theory argues that orientations are assumed to be orthogonal, then the individual may have a task involving orientation as well as an ego involving orientation, and it is this

that may affect whether the individual is also concerned with the demonstration of incompetence. It may be that a mastery-avoidance person is one who has both ego and task goals and when the context is perceived to evoke ego involving criteria, they wish to avoid demonstrating incompetence (Roberts *et al.*, 2007). This needs to be investigated more fully empirically, and only when we have data informing theory will we be able to determine the energizing mechanisms driving mastery avoidance, if that goal actually exists.

In achievement goal theory, the orientations are considered orthogonal and it is an important element of achievement striving, and helps us understand the motivational equation better. Individuals can have both orientations to one degree and another (e.g., Roberts, Treasure & Kavussanu, 1996). Even with elite athletes - those we would expect to exhibit high ego involvement and to succeed with such a profile (Hardy, 1997) - we find that they seem to function better when high ego involvement is tempered with high task involvement (Pensgaard & Roberts, 2003).

Being both task and ego oriented is conceptually coherent with achievement goal theory. Swain and Harwood (1996) have suggested that an individual with both goal orientations cannot fail to be satisfied because they have more than one criterion of success. Duda (1988) has asserted a similar notion and states that persistence may be increased with both orientations because a person has two sources of determining success. For an athlete, being both task and ego involved in an activity is both intuitively plausible and conceptually consistent with achievement goal theory. I have argued for a long time (e.g., Roberts, 1992, 2001; Roberts *et al.*, 2007) that one of the conceptual strengths of achievement goal theory is the dynamic nature of achievement goals. One can shift from one goal to another as the relevant information from the environment is processed. We must not forget that task and ego involvement are dynamic constructs and subject to ebb and flow as the athlete plays the game, or continues with the activity (Roberts, 2001). It is not whether an individual should be either task or ego involved, but rather when being task involved or ego involved is appropriate.

The hierarchical model also may be confounding worry with actual avoidance with mastery avoidance and performance avoidance variants and getting an artifactual factor structure that supports two different avoidance constructs (Smith, Cummings & Smoll, in press). Smith *et al.* were not able to validate the 2 x 2 model involving separate mastery- and ego-avoidance dimensions. Children clearly don't differentiate between the two when the items actually refer to avoiding achievement situations. Thus this raises more doubts about the veracity of the hierarchical definition of achievement goals.

3.3. Are there other goal theories?

Achievement goals have been defined in other ways too. One approach has been to use the concept of value, where goal orientations emerge from the value laden attractiveness of an achievement context. Values are directed at desirable end states of behaviour, and goals are seen as objectives (Bandura, 1986; Eccles & Harold, 1991). As an example, Eccles and her colleagues (Eccles & Harold, 1991) suggest that achievement goals emerge from values and expectancies. Mastery goals emerge from

intrinsic task values and a belief in one's competence to do the task, while performance goals emerge from the utility value of the task for success in an important domain, and the expectancy of outperforming others.

Goals have also been seen as "self-primers", a form of heightened self awareness (Kaplan & Maehr, 2002). Nicholls (1984) suggested that heightened self awareness may make thoughts of competence salient. What is an ego (or performance) goal may well represent a heightened awareness of the self as the person may focus on what one can do, or not do as the case may be. Self awareness certainly may affect ego or performance goals. It is interesting that the research into self awareness is meaningful to achievement goal theory, and may propose a future line of inquiry.

There may be other conceptualizations of achievement goals. It will be the business of future research to attempt to combine the various perspectives into a parsimonious explanation that combines how contexts and individual difference constructs forge achievement goals.

The foregoing reflects one major trend in achievement goal research, the attempt to converge achievement goals into a larger, more parsimonious framework. Elliot and colleagues have attempted to integrate achievement goal theory with more traditional concepts of achievement needs. Kaplan and Maehr (2002) have argued for more general processes of meaning construction that involve the self and the context into a broader framework. This is welcome as the development of specific achievement goals should be based on a sound conceptual framework.

3.4. Are there other achievement goals?

There are other achievement goals identified. Some came from early conceptualizations of achievement goal theory (e.g., Maehr & Braskamp, 1986); however, the parsimony of the dichotomous interpretation has been demonstrated over time. One early goal was a social goal that referred to social approval and/or interpersonal reasons for engaging in achievement tasks (e.g., Maehr & Nicholls, 1980). Little attention has been given to social goals in physical activity in recent times, even though some have raised the concept again when describing the achievement goals of children. Another early goal was that of extrinsic orientation, where the individual strove to achieve an external criteria of success (e.g., Maehr & Braskamp, 1986). But little attention has been paid to extrinsic goals, except within the framework of other motivational conceptualizations (e.g., Deci & Ryan, 2002). And qualitative research has identified other goals in addition to ego and task goals (e.g., Dowson & McInerney, 2001). It may well be that future research, particularly qualitative research, may identify and demonstrate how these goals may further our understanding on the origin and development of achievement goals, and the achievement behaviour they may explain.

The above reflects a second trend in achievement goal research, that of developing other achievement goals. In particular, there have been arguments in favour of recognizing different criteria for engagement in achievement striving, and that these have their own patterns of consequences. But researchers need to be careful in adding unnecessary complexity to the parsimonious interpretation of achievement goals without a concomitant increase in conceptual integration.

4. Conclusions

194

There are two important conclusions we may draw from 25 years of achievement goal research. The first one is that ego involvement (however it has been defined and/or conceptualized) is more likely to lead to maladaptive achievement behaviour, especially when participants perceive their competence to be low, are concerned with failure, or invested in protecting self worth. In such circumstances, the evidence is quite clear, motivation ebbs, task investment is low, persistence is low, performance suffers, satisfaction and enjoyment are lower, and participants feel more negatively about themselves and the achievement context (Roberts *et al.*, 2007). But this does not mean that ego involvement is always negative. In some situations for some people, it is positive. When one has a performance approach goal (e.g., Elliot, 1997), or has an ego (or performance) goal with a high perception of competence (e.g., Pensgaard & Roberts, 2002), then such states of ego involvement are facilitative of achievement and function as positive motivating constructs. When you believe you are competent, then you want to demonstrate that competence, and will seek out contexts to demonstrate the competence. But even then, ego involvement is fragile, and can lead to maladaptive achievement striving as context information is processed and leads one to perceive one's competence to be inadequate (Dweck & Leggett, 1988). As an example, when a child moves from one age division to another, and was a "star" player in the younger age division, he/she may have had high motivation to demonstrate that competence in a normative way because he/she perceived him/herself as able. Suddenly, he/she is less a "star" in the older division. As a consequence, he/she is less likely to be able to demonstrate normative competence, then he/she loses the motivation to perform. In that case, motivation ebbs, persistence lessens, and the child feels less positive about him/herself.

Second, the research is unequivocal that task (mastery) goals are adaptive. When task involved or participants perceive mastery criteria in the context, then motivation is optimized, participants are invested in the task, persist longer, performance is higher, satisfaction and enjoyment are higher, and participants feel more positively about themselves and the task. Being task involved has been consistently associated with desirable cognitive and affective task responses, and more and more evidence is accumulating that achievement behaviour and performance are enhanced too. The research is now clear: To optimize motivation in physical activity, we should promote task involvement. Whether we do it through enhancing socialization experiences so that the individual has a task goal orientation and is naturally task involved (Nicholls, 1989), or we structure the physical activity context to be more task involving (e.g., Treasure & Roberts, 2001), is irrelevant. The evidence has led many sport psychologists to conclude that task involvement better enables learners to manage motivation in the sport experience.

It is probable that always fostering task involving criteria may not satisfy all individuals in the sport experience, especially elite athletes (Hardy, 1997). It may well be that athletes at all levels of competition would benefit from being **both** task and ego involved. Being both task and ego involved is conceptually coherent with achievement goal theory (but not the hierarchical model), and may be valuable in the learning process because it provides multiple sources of competence information to the athlete. Encouraging individuals to be task involved in achievement tasks has

been demonstrated to optimize motivation, even with elite athletes, but we need not be blind to the fact that some athletes do favour and are motivated by ego involving criteria. The task for the investigator and the practitioner is to determine when task and/or ego involving criteria of success and failure are motivational.

As is clear, many questions remain. Are achievement goals the manifestation of needs, values, the valence of outcomes, and/or cognitive schemas driving how one sees one's world and how one responds to the environmental cues extant with achievement striving? What gives meaning to achievement striving for the individual? Within sport and physical activity, we need to address these questions to expand our conceptual understanding of motivational processes and achievement behaviours so that we can intervene effectively to enhance motivation and make the sport and physical activity context enjoyable and satisfying for all. As Nicholls would have stated, we need to optimize motivation for all, not only those who benefit from normative feedback.

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