Motivation in action: A process model of L2 motivation[1]

Zoltán Dörnyei and István Ottó

As part of a long-term project aimed at designing classroom interventions to motivate language learners, we have searched for a motivation model that could serve as a theoretical basis for the methodological applications. We have found that none of the existing models we considered were entirely adequate for our purpose for three reasons: (1) they did not provide a sufficiently comprehensive and detailed summary of all the relevant motivational influences on classroom behaviour; (2) they tended to focus on how and why people *choose* certain courses of action, while ignoring or playing down the importance of motivational sources of *executing* goal-directed behaviour; and (3) they did not do justice to the fact that motivation is not static but dynamically evolving and changing in time, making it necessary for motivation constructs to contain a featured temporal axis. Consequently, partly inspired by Heckhausen and Kuhl's 'Action Control Theory', we have developed a new 'Process Model of L2 Motivation', which is intended both to account for the dynamics of motivational change in time and to synthesise many of the most important motivational conceptualisations to date. In this paper we describe the main components of this model, also listing a number of its limitations which need to be resolved in future research.

Introduction

The motivation model presented in this paper has grown out of a research project whose aim was to design motivational strategies for the purpose of classroom intervention in second language (L2) education. The rationale for the project lay in the fact that the amount of psychological research devoted to analysing *how* to motivate language learners has been rather meagre relative to the amount of research conducted on *what* motivation is—the emphasis in both theoretical and empirical work on motivation has traditionally been placed on identifying various influential motives and validating motivational theories. Consequently, as Good and Brophy (1994) summarise, "motivation [in the classroom] did not receive much scholarly attention until recently, so that teachers were forced to rely on unsystematic 'bag-of-tricks' approaches or on advice coming from questionable theorizing" (p. 212). It must be noted that there have been a number of exceptions to this generalisation (e.g. Brophy, 1987, 1998; Burden, 1995; Good & Brophy, 1994; Jones & Jones, 1995, McCombs, 1994; McCombs & Pope, 1994; Pintrich & Schunk, 1996; Raffini, 1993, 1996; and in the L2 field: Alison, 1993; Brown, 1994; Cranmer, 1996; Dörnyei, 1994; Dörnyei & Csizér, 1998; Oxford & Shearin, 1994; Williams & Burden, 1997) and these studies on various aspects of motivating learners have constituted an important starting point in our project.

In order to generate a systematic collection of motivational strategies, we need a solid motivational theory to serve as an underlying organisational structure. Although, as is well known, there is no shortage of competing motivational theories in social and motivational psychology, none of the models we have considered were entirely appropriate for our purpose for three main reasons:

(1) They did not provide a sufficiently *comprehensive and detailed summary* of all the relevant motivational influences on learner behaviour in the classroom.

(2) Motivational theories typically focus on how and why people *choose* certain courses of action, rather than on the motivational sources of *executing* goal-directed behaviour, whereas, as we will argue below, in educational contexts (and from the point of view of motivational classroom interventions in particular) the motivational influences on action implementation are more im-

portant than the directive function of motivation.

(3) We felt that most motivational theories did not do justice to the fact that motivation is not a static state but rather a dynamically evolving and changing entity, associated with an ongoing process in time; thus, we intended to draw up a motivation construct that had a featured *temporal axis*.

Comprehensive versus reductionist paradigms

The fact that motivation theories in general tend not to offer very detailed and comprehensive taxonomies of the relevant motivational components is not at all surprising, because the main objective of mainstream motivation research has been exactly the opposite. Since the study of motivation concerns the basic question of why humans behave as they do, it follows that this issue is immensely complex and the number of potential determinants of human behaviour is extensive. A great deal of effort in motivation research has, therefore, focused on drawing up *reductionist paradigms* by trying to identify a relatively small number of key variables to explain a significant proportion of the variance in people's behaviour.

In order to reduce the number of relevant motivational components, various theories have selected certain motivational variables as principal components and then proposed that these subsumed or mediated the other interrelated factors. *Expectancy-value theories* assume that motivation to perform various tasks is the product of two key factors: the individual's *expectancy* of success in a given task and the *value* the individual attaches to success in that task. Within this framework, we can find a variety of subtheories that attempt to explain the cognitive processes that shape the individual's expectancy: *attribution theory* places the emphasis on how one processes past achievement experiences (successes or failures); *self-efficacy theory* refers to people's judgement of their capabilities to carry out certain specific tasks; and *self-worth theory* claims that the highest human priority is the need for self-acceptance and to maintain a positive face.

Following somewhat different principles, *goal theories* propose that human action is spurred by purpose, and for action to take place, *goals* have to be set and pur-

sued by choice. Accordingly, key variables in goal theories concern various *goal properties*. The underlying principle of a third main direction in current motivation research, *self-determination theory*, and the accompanying intrinsic vs. extrinsic motivational paradigm, is that the desire to be self-initiating and self-regulating is a prerequisite for any human behaviour to be intrinsically rewarding, and therefore the essence of motivated action is a sense of autonomy. Finally, the key tenet in *social psychology* is the assumption that it is *attitudes* that exert a directive influence on people's behaviour since one's attitude towards a target influences the overall pattern of the person's responses to the target. It must also be noted that although these broad approaches dominate current thinking, in motivation research, there have in the past been a number of other factors as well that were at the time seen as central to the understanding of human behaviour (e.g. inner forces such as instincts, volition, and psychical energy; stimulus and reinforcement contingencies; basic human needs).

From the point of view of designing motivational classroom interventions we need a particularly detailed and somewhat eclectic model that would list all the main motives that are likely to have an impact on learning achievement. Although some key variables do indeed appear to stand out in terms of their pervasive effect on learning behaviour in general, the number of motivational influences that are fundamental (in the sense that their absence can cancel or significantly weaken any other factors whereas their active presence can boost action behaviour) is far more extensive than each individual theory would suggest. Weiner's (1984) conclusion summarises well our stance: "Any theory based on a single concept, whether that concept is reinforcement, self-worth, optimal motivation, or something else, will be insufficient to deal with the complexity of classroom activities" (p. 18).

'Choice' versus 'executive' motivation

Another reason why existing motivation models were inadequate for designing motivational classroom interventions is related to the target of our research: the study of a foreign language. Schumann (1998) refers to L2 studies as "sustained deep learning" and argues that all such sustained learning processes of skill/knowledge acquisition

(i.e. also applying to other areas such as the study of mathematics, bridge, celestial navigation, etc.) show different motivational characteristics from short-term activities and simpler learning tasks. This is because in sustained learning contexts a major motivational function is to maintain the motivational impetus for a considerable period (often several years). In contrasting the motivational basis of "skill acquisition" with that of simpler activities that do not require task learning because the goal is executed quickly, Kanfer (1996) presents a rather similar argument:

> When goals can be accomplished without task learning, the influence of motivation on behaviour is often largely a matter of choice. For example, the decision about which of two job offers to accept depends primarily on the individual's evaluation of the costs and benefits associated with each offer. Once a decision is made, however, the actions involved in implementing the goal of accepting the job are straightforward. … However, this is *not* the case in skill acquisition. During skill training, goal accomplishment proceeds slowly, as the individual develops an understanding of the task and proficiency in skills relevant to performance. … Continued task practice (i.e. persistence) is necessary to yield improvements in task performance. But for practice to have a positive effect on performance, additional motivational mechanisms are required to sustain attention and effort over time and in the face of difficulties and failures. (p. 405)

In other words, complex learning contexts reduce the role of the motivational influences associated with the initial decision to pursue the goal, and highlight the importance of motivational influences that affect action during goal implementation. Heckhausen (1991, p. 170) refers to this duality of motivational aspects as 'choice motivation' and 'executive motivation', and points out that motivation research has traditionally restricted its focus to the first aspect, while including few motivational paradigms touching upon executive aspects.

Educational settings differ from many achievement situations in that most of the decisions and goals are not really the learners' own products but are imposed on them by the system, thus limiting the importance of the 'choice' aspect of motiva-

tion. In school environments, the key motivational issues involve maintaining assigned goals, elaborating on subgoals, and exercising control over other thoughts and behaviours that are often more desirable than concentrating on academic work. Therefore, in order to explain a significant proportion of the variability in learner persistence in classroom contexts, we need to focus on 'executive motivation', that is, consider motivational influences that operate during task engagement, facilitating or impeding goal-directed behaviour.

The temporal organisation of motivation

The third main concern of ours has been that very few of the existing motivation theories contain a temporal dimension, that is, they do not portray motivational processes as they happen in time. Although some motivation theories have included certain time elements, these have typically focused on broad issues such as past attributions or future goals, rather than detailing sequences or patterns of motivational events and components (cf. Karniol & Ross, 1996; Raynor & Roeder, 1987). We would assert, however, that in view of the fact that the mastery of most subject matters, particularly a second language, usually takes several months or years, the temporal axis of a motivational theory relevant to such sustained activities should be featured. Indeed, even within the duration of a single course, most learners experience a regular fluctuation of their enthusiasm/commitment, often on a day-to-day basis. One basic assumption underlying this paper is the belief that motivation is not so much a relatively constant state but rather a more dynamic entity that changes in time, with the level of effort invested in the pursuit of a particular goal oscillating between regular ups and downs.

We must also note that the initial motivation to pursue an action does not simply arise from one moment to the other. Rather, motivation can be associated with a dynamic mental process whereby the individual undergoes a number of stages such as initial planning and goal-setting, intention-formation, the generation of concrete subtasks to be taken, prioritising between multiple tasks, the enactment of intentions, and the evaluation of the outcomes. In other words, motivation from this perspective refers to a complex of decision-making,

action-implementation and action-controlling processes as well as the accompanying energy sources fuelling the action. Although motivation theories in the past have typically suggested a more static construct, one valuable exception has been a line of research associated with the work of German psychologists Julius Kuhl and Heinz Heckhausen and their associates (e.g. Gollwitzer, 1990; Heckhausen 1991; Heckhausen & Kuhl, 1985; Kuhl, 1985, 1987, 1992; Kuhl & Beckmann, 1994). Their model of motivational processes, often referred to as 'Action Control Theory', emphasises the distinction of separate, temporally ordered action phases, introducing a "temporal perspective that begins with the awakening of a person's wishes prior to goal setting and continues through the evaluative thoughts entertained after goal striving has ended" (Gollwitzer, 1990, p. 55). This approach has been very influential on our thinking and, therefore, before presenting our Process Model, we begin with a brief summary of the main tenets of Heckhausen and Kuhl's theory.

Heckhausen and Kuhl's theory of volition

The starting point in Heckhausen's theory (for an English summary, see Heckhausen, 1991) is that research on motivation should be divided into two main camps, the study of (a) how intentions are *formed* and (b) how they are *implemented*. As he argues, "Why one wants to do something and that one wants to do it is one thing, but its actual implementation and successful completion is another" (p. 163). He compares the boundary between the intention-formation process of the 'predecisional phase' and the implementation process of the 'postdecisional phase' to a metaphorical 'Rubicon', which separates two distinct processes with different functional characteristics. The first, decision-making stage ('choice motivation') has been the main focus of most mainstream psychological theories of motivation in the past, with the analyses centring around complex planning and goal-setting processes during which initial wishes and desires are articulated and evaluated in terms of their desirability and chance of fulfilment. According to Heckhausen's conceptualisation, a positive evaluation results in an intention to act, which then guides the particular action

sequence until the goal is reached. This second, implementional stage ('executive motivation', also termed the 'volitional' stage), involves motivational maintenance and control during the enactment of the intention. The key issues to be examined here are the phenomena of action initiation, perseverance, and overcoming internal obstacles to action.

Building on the above principles, Heckhausen and Kuhl (1985) developed a more detailed 'Theory of Action Control', which was further elaborated on by Kuhl and his associates (e.g. Kuhl, 1985, 1987, 1992; and the studies in Kuhl & Beckmann, 1994). The theory attempts to explain the common observation that people's actual behaviour does not always correlate with the priorities set by their expectancy and value beliefs, and that even when the expectancies and values remain constant, the accompanying motivational tendencies show a marked waxing and waning. Furthermore, there is also the phenomenon that people sometimes persist in pursuing an activity in spite of more attractive alternative goals.

The key component of Kuhl's (1987) action control model is 'intention', which is defined as an "activated plan to which the actor has committed herself or himself" (Kuhl, 1987, p. 282). In order for action to take place, two memory systems need to be activated at the same time: *motivation memory* (which is content-independent, that is, when it is activated, it serves as a continuous source of activation supporting any structure that is currently dominant in other memory systems) and *action memory* (which contains behavioural programmes for the performance of the particular act). An activated plan with support from the motivation memory system becomes what Kuhl (1987, p. 284) calls a "dynamic plan", which means that the executional process has been instigated. From this point on the motivation system carries out a new, chiefly maintenance role, that is, it keeps sustaining (i.e. energising) the pursuit of the intention and also protecting it against the detrimental effects of competing plans. Once the plan has been completed, the motivation system is turned off. If the execution of the plan is unsuccessful, an attempt is made to abandon the plan.

An important part of action control theory is the set of processes in charge of action maintenance, that is, the active use of action control strategies to protect dynamic (i.e. ongoing) behavioural intentions. Kuhl (1987) describes six such self-regulatory

strategies:

(1) *selective attention*, that is, intentionally ignoring attractive alternatives or irrelevant aspects;

(2) *encoding control*, that is, selectively encoding only those features of a stimulus that are related to the current intention;

(3) *emotion control*, that is, the active inhibition of emotional states that may undermine the enacting and protection of the intention, as well as the conscious generation of emotions that are conducive to the implementation of the intention;

(4) *motivation control*, which is an active process of changing the hierarchy of tendency strengths when a more powerful alternative arises, for example, by focusing on what would happen if the original intention failed and by keeping in mind favourable expectancies or positive incentives;

(4) *environment control*, that is, manipulating the environment in a way that the resulting environmental (or social) pressure or control makes the abandoning of the intention more difficult (e.g. by making a social commitment or asking people not to allow one to do something), or by creating safeguards against undesirable environmental temptations (e.g. by removing objects that invite unwanted activities);

(5) *parsimony of information processing*, which essentially refers to a "let's not think about it any more but get down to doing it" strategy, particularly if further processing may reveal information that undermines the motivational power of the current intention.

Another important facet of Kuhl's (1987) theory is the distinction between *action* and *state orientations*. In the first, the individual's focus is on a fully-developed and realistic action plan; in the state orientation mode, however, "attention focuses on the present state (*status quo*), a past state (especially: a failure) or a future state (especially: unrealistic goals)" (p. 289). State orientation (which is similar in many ways to 'learned helplessness') is therefore seen as a counterproductive disposition. Although state orientation can be induced by uncontrollable failure experiences or unrealistic instructions, Kuhl assumes that the two orientations are, to some extent, established individual difference factors; that is,

some people are more inclined toward one orientation than towards the other.

The proposed Process Model of L2 Motivation

Figure 1 presents the schematic representation of our proposed Process Model of L2 Motivation. As can be seen, the model contains two dimensions: *Action Sequence* and *Motivational Influences*. The first dimension represents the behavioural process whereby initial wishes, hopes, and desires are first transformed into goals, then into intentions, leading eventually to action and, hopefully, to the accomplishment of the goals, after which the process is submitted to final evaluation. The second dimension of the model, Motivational Influences, include all the energy sources and motivational forces that underlie and fuel the behavioural process. These will be detailed when discussing the specific subphases of the action sequence they affect.
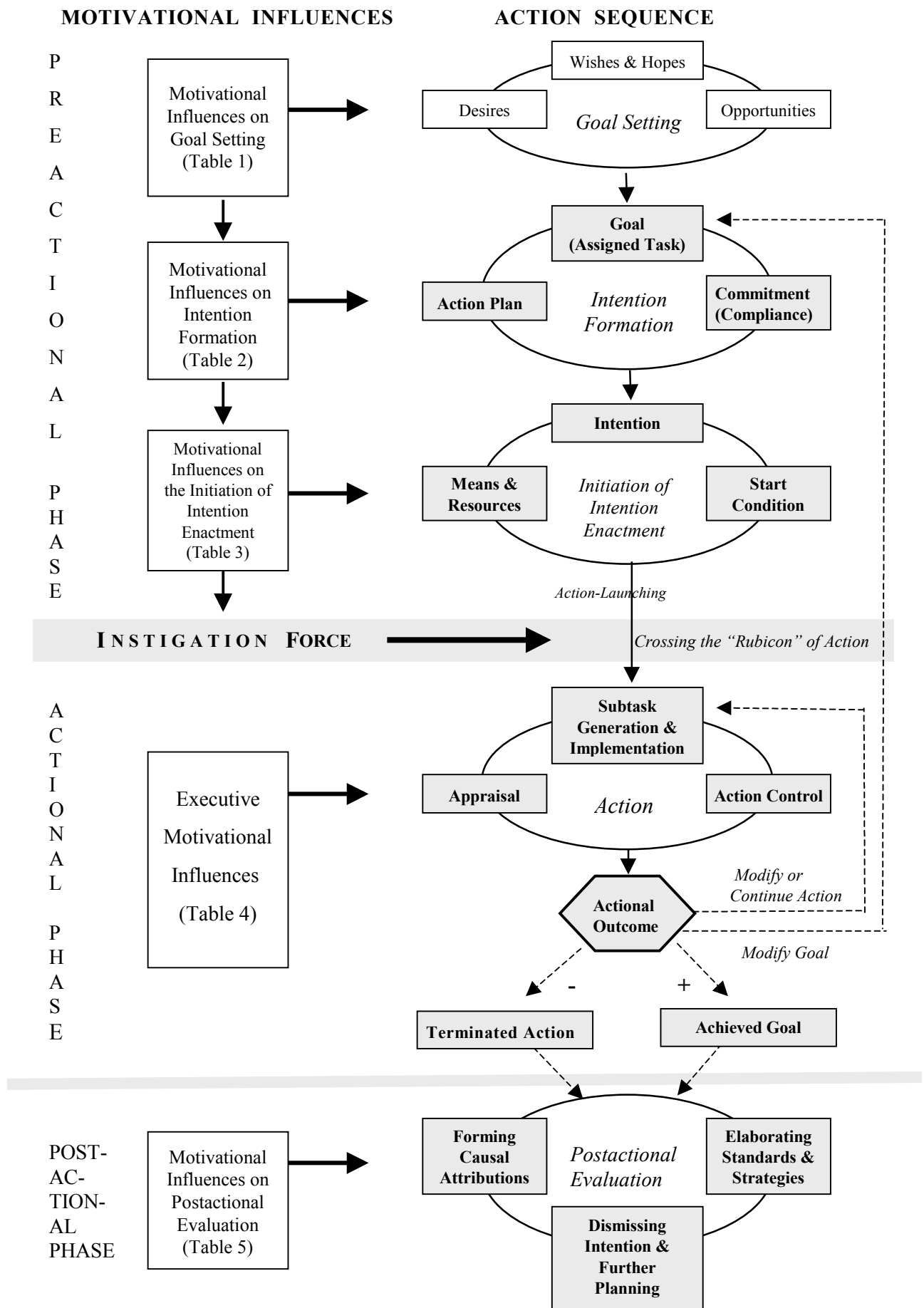
Action Sequence

Following Heckhausen and Kuhl's Action Control Theory, the action sequence process has been divided into three main phases: *preactional phase*, *actional phase*, and *postactional phase*.

Preactional phase

The first, preactional phase, is made up of three subphases, *goal setting*, *intention formation*, and the *initiation of intention enactment*. *Goal setting* is described as having three antecedents, *wishes/hopes*, *desires* and *opportunities*. This last component is included because on occasions the starting point of the motivated behavioural process is not the individual's fantasy land

Figure 1. Schematic representation of the Process Model of L2 Motivation

MOTIVATIONAL INFLUENCES

ACTION SEQUENCE

PREACTIONAL PHASE

Motivational Influences on Goal Setting (Table 1)

→

Goal Setting
- Wishes & Hopes
- Desires
- Opportunities

↓

Motivational Influences on Intention Formation (Table 2)

→

Intention Formation
- Goal (Assigned Task)
- Action Plan
- Commitment (Compliance)

↓

Intention

Motivational Influences on the Initiation of Intention Enactment (Table 3)

→

Initiation of Intention Enactment
- Means & Resources
- Start Condition

Action-Launching

INSTIGATION FORCE → *Crossing the "Rubicon" of Action*

ACTIONAL PHASE

Executive Motivational Influences (Table 4)

→

Action
- Subtask Generation & Implementation
- Appraisal
- Action Control

Modify or Continue Action

Actional Outcome

Modify Goal

− **Terminated Action**

+ **Achieved Goal**

POSTACTIONAL PHASE

Motivational Influences on Postactional Evaluation (Table 5)

→

Postactional Evaluation
- Forming Causal Attributions
- Elaborating Standards & Strategies
- Dismissing Intention & Further Planning

but rather an emerging opportunity. As can be seen in the figure, the above components of goal setting are not shaded grey, indicating that at this stage the process has not as yet reached a state of concrete reality. The first component to do so is the outcome of the goal setting process, the actual *goal*. It is at this point that the motivated behavioural process begins in earnest.

A 'goal' is a rather ill-defined or over defined term in motivation theories. The assumed role of goals in various constructs ranges from being secondary (e.g. the predominating social psychological theory of language learning motivation by Gardner, 1985, did not include goals—or as he termed them, *orientations*—in the core motivation concept), to being the single most important determinants, or the motivational foci, of action. In Locke and Latham's (1994) goal-setting theory, for example, a goal, is seen as the 'engine' to fire the action and provide the direction in which to act. We take an intermediary position and see goals as the first concrete mental representations of a desired endstate; goals, in our theory, do not directly determine action but are an indispensable step in the motivated behavioural sequence.

Similarly to Action Control Theory, an 'intention' in our model is qualitatively different from a 'goal' in that it already involves *commitment*. This is an important distinction and it has been made in order to account for the huge difference which exists between, on the one hand, the multiple ideas, wishes, hopes, desires, and long-term plans the individual may harbour at a given point of time and, on the other hand, the far fewer concrete intentions the individual will make actual resolutions to carry out. The significance of the 'commitment' component was also recognised by goal theoreticians. Locke and Latham (1990), for example, state that "*Believing* that a goal is desirable and reachable does not automatically force an individual to act. The individual must *choose* to put his or her judgement in action" (p. 127); accordingly, they postulate that 'goal commitment' is an important goal property. Commitment making is a highly responsible personal decision and it entails a significant qualitative change in one's goal-related attitudes. As Baumeister (1996) argues,

> commitments may involve staking interpersonal prestige and even material resources on that goal. Commitments may also entail forgoing other possible goals or pastimes, along with the rewards that might have attended them. In short, these cases involve placing contingencies on oneself. (p. 37)

It needs to be noted here that school situations typically dictate that students meet established goals as a performance requirement for many academic tasks; these goals are often set by teachers, sometimes school districts, or by parents (Corno, 1993). Thus, instead of a voluntarily selected goal we often find *assigned tasks* set externally for the students and, therefore, commitment making can be seen more as a process of reaching *compliance*. We will return to this issue at the end of the paper.

Adding commitment to a goal is a crucial step in the motivational process but it is not sufficient in itself to energise action if the goal is not translated into concrete steps the individual needs to take. Thus, a final necessary step in generating a fully operational intention is to develop a manageable *action plan* which contains the necessary technical details regarding the planned action, namely the action schemata (i.e. concrete behavioural guidelines such as subtasks to implement, and a number of relevant attainment strategies to follow) and the time frame or start condition (i.e. temporal specifications regulating the actual timing of the onset of action, e.g. a concrete time - "I'll get down to it tomorrow" - or a condition - "I'll do it when I have finished this"). Although a plan of action does not have to be completed before initiating an act—it may be (and usually is) finalised while acting—there must be at least a general action plan before one is able to act at all.

An operationalised intention is the immediate antecedent of action, but it is important to realise that action does not follow automatically from it. The right opportunity for starting the action may never materialise, or the means and resources may not be made available, leaving the intention unfulfilled. Thus, our model suggests that there are two necessary conditions for issuing an "action-launching impulse" (Heckhausen & Kuhl, 1985, p. 137): the availability of the necessary *means and resources* and the *start condition*. The exact start condition has been specified by the action plan and, as mentioned above, it can be a specific time or a condition. In addition, one usually has several parallel intentions in mind of which only one or two can be implemented at a time. In order to

coordinate these, the action plan assigns priority tags to the intentions, determining their order of enactment, and, therefore, the start condition may also mean that the turn of a certain intention has come.

Actional phase

The onset of action is a major step in the motivational process, resulting in significant qualitative changes. Following Heckhausen, we believe that action engagement can be compared to crossing a metaphorical 'Rubicon': the individual has committed him/herself to action and now the emphasis shifts to factors concerning the implementation of action. In other words, "choice motivation" is replaced by "executive motivation" (Heckhausen, 1991, p. 170). As Dibbelt and Kuhl (1994) state, "The theory of action control explicitly states that the actual enactment of an action can be based on sources of motivation that differ from those upon which the original decision was based." (p. 179).

During the *actional phase* three basic processes come into effect: *subtask generation and implementation*, a complex ongoing *appraisal* process, and the application of a variety of *action control* mechanisms. The first of these refers to learning behaviours proper. Action initiation starts with implementing the subtasks that were specified by the action plan; however, as mentioned earlier, action plans are rarely complete (particularly not with sustained activities such as the pursuit of L2 learning) and during the course of action, one continuously generates (or is assigned) subtasks/subgoals. In fact, the quality of subtask generation and the accompanying setting of subgoals is one of the principal indicators of effective learning.

The second important ongoing process is *appraisal*. One continuously evaluates the multitude of stimuli coming from the environment and the progress one has made towards the action outcome, comparing actual events with predicted ones or with ones that an alternative action sequence would offer. This complex process is further complicated if we consider the multi-level nature of the stimuli one receives. The basic unit of language learning behaviour is the participation in language tasks. These tasks are embedded in a number of physical and psychological contexts of various breadths such as the language class, the course, the

L2 as a subject matter, language learning in general, learning in the classroom in general, learning in the particular institution in general, learning in general, and achievement behaviour in general. The important point is that a person's appraisal of one level can easily be transferred to a broader or narrower level; for example, negative attitudes evoked by failure in doing a particular task can easily be generalised to the whole language course or to the whole of language learning ("I'm just not good at languages…"), and, conversely, established attitudes about the whole school can profoundly affect one's specific L2 learning disposition ("I dislike everything that's going on in this building").

The third main process, *action control*, denotes those processes which "*protect* a current intention from being replaced should one of the competing tendencies increase in strength before the intended action is completed." (Kuhl, 1994, p. 102). In academic situations this can be characterised, using Corno's (1993) words, "as a dynamic system of psychological control processes that protect concentration and directed effort in the face of personal and/or environmental distractions, and so aid learning and performance" (Corno, 1993, p.16). Although the term 'action control' may sound novel, similar processes have been the subject of an increasing amount of research in educational psychology for the past decade under the umbrella term of 'self regulatory processes'. For the purpose of our model we will distinguish between three types of self-regulatory strategy: action maintenance, language learning, and goal setting strategies. Active use of such strategies may 'save' the action when ongoing monitoring reveals that progress is slowing, halting, or backsliding.

Action control/self-regulatory strategies are particularly important from an educational point of view for at least two basic reasons. First, as Wong and Csikszentmihalyi (1991) have found, studying and schoolwork in general are considered among adolescents' to be the least rewarding activities. When in class or doing homework students report "low intrinsic motivation and negative experience. They generally feel sad, passive, constrained, bored, detached, and lonely" (p. 544). Schneider, Csikszentmihalyi & Knauth (1995) report a strong negative relationship between being in an academic class and feeling motivated, which they explain by the fact that students tend to find most academic classroom

activities unenjoyable and uninteresting. All this creates fertile ground for distractions that need to be controlled for the sake of learning effectiveness.

Second, as argued in the introduction, in school environments most tasks are imposed on the students without involving them in designing their own learning schedules or choosing which activities to engage in. In school, there is often little preactional activity by students. Therefore, the cumulative instigation force arising from the preactional phase (i.e. 'choice motivation') is often relatively weak and needs active scaffolding during the actional phase, which is exactly what action control processes are there for.

On the basis of the interplay of the appraisal and control/maintenance processes, the ongoing action will lead to some kind of *actional outcome*: the optimal scenario is that the actor achieves his/her goal, whereas the other extreme is terminating the action completely. However, arriving at a dead end during the actional phase does not necessarily lead to action abandonment. If the motivational foundation of the initial wish or desire was sufficiently powerful, the individual may mentally step back to the preactional phase, revise the concrete goal to be pursued and form a new intention (e.g. by lowering the level of aspiration). Alternatively, by maintaining the original intention, the individual may fine-tune or modify the strategies and subtasks applied in the pursuit of the goal during the actional phase. Finally, in case of a temporary interruption, action can be continued at a later time.

Postactional phase

The postactional stage begins after either the goal has been attained or the action has been terminated; alternatively, it can also take place when action is interrupted for a longer period (e.g. a holiday). The main processes during this phase entail evaluating the accomplished action outcome and contemplating possible inferences to be drawn for future actions. Postactional evaluation is different from the ongoing appraisal process in that here the individual is not engaged in actual action any longer (that is, he/she is no longer in an implementation-oriented mind set), which allows him/her to adopt a broader perspective on the whole motivated behavioural

process (starting from goal-setting) and its effect on his/her self-esteem (Heckhausen, 1991). During this phase, the actor compares initial expectancies and plans of action to how they turned out in reality and forms *causal attributions* about the extent the intended goal has been reached. This critical retrospection contributes significantly to accumulated experience, and allows the learner to elaborate his/her *internal standards* and the repertoire of *action-specific strategies*. It is through such evaluation that an individual can develop a stable identity as a successful learner (Boekaerts, 1988).

The formation of adequate standards to compare actual and potential performance, and the extension of the repertoire of personalised action-control strategies already serve to prepare the ground for the future, but before further action can be taken, the initial intention has to be *dismissed* to give way to new wishes, goals, and intentions. An accomplished intention may clear the way for a subsequent intention leading to a more distant superordinate goal—in this case the postactional motivation process evolves into a preintentional phase and the cycle begins anew.

Motivational influences on the different action phases of the model

The action sequence dimension described above outlines the sequential pattern of the motivational process but it is incomplete without a second, complimentary dimension of motivation which is made up of the various *motivational influences* that fuel the actional sequence. These energy sources can be enhancing or inhibiting, depending on whether they contribute to the successful implementation of the goal or dampen the actor's endeavour. As such, motivational influences encompass all the various motives discussed in the motivation literature, including cognitive, affective, and situational factors or conditions. In our model, we have made a point of including every major motivational factor from previous studies in the L2 field and from mainstream psychology that has been found to influence the commitment to learning.

As indicated in Figure 1, motivational influences form five clusters, according to the five specific phases of the motivated action sequence they affect (i.e. goal setting, intention formation, initiation of intention

enactment, action, and postactional evaluation). The specific lists of the relevant motives are included in Tables 1-5; Figure 1 describes the interrelationship between these motive sets. The motivational influences associated with goal-setting are linked with an arrow to the determinants of intention formation, which are in turn linked to those of the initiation of intention enactment. This indicates that in the preactional phase the relevant motivational influences are assumed to have a cumulative effect: the forces active in the first stage continue to exert their influence in the second and the third phases, and the factors first appearing in the second (intention formation) phase also fuel the third (intention enactment) phase.

Thus, the preactional motivational system works like a series of interlinked filters: Only the wishes that receive sufficient support from the first set of motivational influences qualify for becoming goals; these goals are then submitted to a second motivational phase, intention formation, where new energy sources are added to the resultant motivational force, and if this exceeds the necessary threshold for stepping further, the goal becomes a fully-fledged *intention;* finally, an action launching impulse will be issued if the sum of the influences that have fuelled the intention so far and the new factors that come into force in the third, action initiation phase reaches a certain level of strength. The overall resultant motivational force associated with the preactional phase is labelled in the figure as the *instigation force,* which determines the intensity of action initiation.

Moving further 'down' Figure 1, however, the motivational influences associated with the actional phase are *not* directly related to the motives affecting the earlier stages of the process. This is in line with Heckhausen and Kuhl's 'Action Control Theory', which emphasises that 'executive motives' are largely different from the motives making up 'choice motivation'. Indeed, very few motivational forces have a global effect on every stage of the actor's behaviour, which explains why even a strong motivational disposition can be cancelled out by newly emerging forces. Only by assuming such a division of motives related to the preactional and the actional phases can we explain, for example, the frequent phenomenon of someone deciding to enrol in a language course (motivated by 'choice motivation'), then soon dropping out (because the 'executive motives' fail to sustain the instigation force), and then again reenrolling in the course (since once action engagement has been terminated, preactional forces become activated again). The reason why such cycles do not go on ad infinitum is that after the termination (or completion) of action a third set of motivational influences, associated with the postactional phase, come into force, and the explanations one arrives at during this phase about the previous sequence (e.g. "I simply don't have the time/energy/aptitude for L2 learning") significantly affect subsequent action tendencies.

Goal setting

At any given time people harbour a great variety of wishes, hopes, desires, 'what-would-happen-ifs', 'if-onlys', etc. These coexist peacefully alongside each other on the plane of unreality; some of them will never get beyond this stage and remain as 'daydreams', whereas others will be acted out and fulfilled in the long run. How do we select from the multitude of our wishes and desires and how do we process the selected wish/desire? The understanding of human motivation starts at this basic level of transforming 'fantasies' into reality-oriented goals.

Table 1. Motivational influences on goal setting

- Subjective values and norms
- Incentive value of goal-related action, outcomes, and consequences (instrumentality)
- Perceived potency of potential goal
- Environmental stimuli; action possibilities; family expectations
- Language/language-learning-related attitudes (integrativeness)

In our model we have distinguished five main motivational factors underlying the goal-setting process (Table 1). First and foremost are the individual's *subjective values and norms* that have developed during the past, as a reaction to past experiences. This "sense-of-self" dimension (Maehr, 1984, p. 126) refers to the more or

less organised collections or internalised perceptions, beliefs, and feelings related to who one is in the social world. Individuals differ greatly in the content and the hierarchies of their value dispositions (cf. the saying, "There is no accounting for taste"). These internal preferences interplay with the specific *incentive values* associated with the anticipated goals. It is important to realise that there are three different levels of goal-specific values (Heckhausen & Kuhl, 1985): The first-order level refers to the *action* (i.e. the intrinsic value of the ongoing activity itself), the second-order level to the *outcome* of an action (the inherently valuable characteristics with reference to one's basic personal values and needs), and the third-order level to the *consequences* that might arise from an achieved outcome. Heckhausen and Kuhl's conceptualisation is very similar to a comprehensive model of task values developed by Eccles and Wigfield (1995), defining such values in terms of four components: "intrinsic value" (or interest), "attainment value" (or importance), "extrinsic utility value", and "cost". In our model the last component, cost, is assumed to come into force only in the second, intention formation stage.

In the L2 field, the perceived incentive value of the outcome and the consequence has typically been captured by Gardner's (1985) concept of 'instrumental motivation' or 'instrumentality'. Because the study of an L2 has usually been conceived of as merely instrumental to reaching the desired endstate (namely, L2 proficiency), the first aspect, the intrinsic interest in pursuing language studies, has been largely underplayed (cf., however, Noels, Clément & Pelletier, in press).

The above mentioned value preferences already screen out many 'unsuitable' wishes and desires, and they also help to determine the general *"potency"* (Heckhausen & Kuhl, 1985, p. 135) of the goals. This refers to a subjective feeling about the general probability of attaining the respective goal. Potency appraisals are based on the opportunities and affordances that one perceives one will have in the future—wishes and desires that are seen as totally unrealistic remain ignored.

The *external environment* also exerts a considerable influence on our choice of potential goals. Some of our wishes may be seen as supported by the environment while others may be completely out of place. Maehr (1984) uses the term *'action possibilities'* to refer to the behavioural alterna-

tives that a person perceives to be available and appropriate in a given situation, in view of the sociocultural norms and pressures (including family expectations), as well as other external factors such as geographic location and socioeconomic status that exists for the individual. Broadly speaking, one will act in terms of what is perceived as possible. In educational contexts the role of the environment is particularly strong. As Anderman & Maehr (1994, p. 296) argue,

> While individuals may bring entering biases to bear in any given situation, characteristics of the situation are also crucial in determining what goals will be adopted. Thus, recent studies suggest that the psychological environment of the classroom may have a strong influence on the goals that students adopt.... The adoption of goals is related to specific instructional practices (e.g. grouping, recognition, evaluation, the nature of the task) and students' perception of goal stresses... Other research suggests that the school as a whole can influence the goals that students adopt. Research on school culture and climate suggests that schools emphasise different goals.

Finally, since our model concerns motivation to learn a L2, attitudes toward the L2 and L2 learning (captured by Gardner's, 1985, concept of 'integrativeness') also play a crucial role in making any L2-related motivational decisions (e.g. language choice, decision to start L2 learning or to visit the L2 community for learning's sake).

Intention formation

Arriving at a goal, means that the individual has formulated an 'I want to' type of internal statement. However, the fact is that not every goal will be realised. Simply having the incentive to strive for a goal does not guarantee that the person will actually undertake the effort that is required. There are a great number of factors that determine whether the goal will be further processed into an *intention,* and therefore *intention formation* involves a process of deliberation, weighing the feasibility and desirability of the available options, and visualising the possible incentive-laden consequences of one's potential actions (Table 2)

Table 2.   Motivational influences on intention formatiom

- Expectancy of success/perceived coping potential
    - self-efficacy/self-confidence
    - perceived goal difficulty
    - amount of expected support
    - L2 anxiety
    - perceived L2 competence
    - L2 contact
    - causal attributions
- Relevance (personal and setting-related); cost-benefit calculations
- Need for achievement and fear of failure
- Degree of self-determination (type of regulation)
- Goal properties
    - goal specificity
    - goal proximity
    - goal harmony/conflict
    - level of aspiration
- Availability of task opportunities and options
- Learner beliefs about L2 learning; knowledge of learning strategies; domain-specific knowledge
- Urgency; external demands; unique opportunity

A selected goal, by definition, must have already passed the test of potency, that is, it must have been regarded as broadly attainable. In the intention formation phase the *expectancy of success* is more specifically assessed. Based on a number of interacting factors such as *self-efficacy/self-confidence*, *perceived goal difficulty*, the amount of *expected support*, *L2 anxiety*, *perceived competence*, the quality and quantity of previous *L2 contact*, and *causal attributions* about past experiences (successes and failures), the individual makes an evaluation of his/her *coping potential* in the planned action. The greater the perceived likelihood of goal attainment, the higher the degree of the individual's positive motivation. Conversely, it is unlikely that effort will be invested in a task if the individual is convinced that he/she cannot succeed no matter how hard he/she

tries. One thing needs to be noted here regarding goal difficulty: The above would suggest that the easier the goals are the higher the individual's motivation, whereas this is not the case. Locke and Kristof (1996) report on meta-analyses of over 400 studies which show unambiguously that goals that are perceived as difficult and challenging (but still attainable) lead to higher performance than goals that are easy.

A second important motivational factor is the perceived *relevance* of the goal and the accompanying *cost-benefit calculations* the individual makes. Relevance can be both personal and setting-related. The personal aspect is associated with the individual's current life concerns: Only a limited number of goals can be pursued at a time so the individual needs to choose the ones currently most pressing. Setting-related relevance is similar in nature but concerns more specific situational aspects. It implies that a goal may or may not fit into the current concerns that dominate at the time or social setting. For instance, action tendencies directed at relaxing activities are more appropriate, and therefore more powerful, for leisure or holiday periods than in vocational settings (Heckhausen & Kuhl, 1985). *Costs* involve the negative value component of a goal. So far it has been the positive aspects of the initial wishes that were considered, whereas now the individual needs to compare those with the inevitable negative valence of the planned action, which includes factors such as expended effort and time, other actions that the planned action would exclude, and various emotional costs (e.g. anxiety, fear of failure).

Achievement motivation theories have traditionally entailed the relatively stable and enduring personality constructs of *need for achievement* and *fear of failure* (e.g. Atkinson & Raynor, 1974). Individuals with a high need for achievement are interested in excellence for its own sake, tend to initiate achievement activities, work with heightened intensity at these tasks, and persist in the face of failure. Fear of failure is the opposite of need for achievement in that here the main drive to do well comes from avoiding a negative outcome rather than approaching a positive one. These two tendencies are considered to affect a person's achievement behaviour in every facet of life, including language learning.

The issue of *self-determination*, or learner autonomy, and the related paradigm of intrinsic versus extrinsic motivation have

been in the focus of motivational psychology for over two decades, and it has become an integral part of several L2 motivational approaches in the 1990's (for a review, see Dörnyei, 1998). Without going into details here, it has been generally accepted that motivation to learn and learner autonomy go hand in hand, that is, "enhanced motivation is conditional on learners taking responsibility for their own learning [...] and perceiving that their learning successes and failures are to be attributed to their own efforts and strategies rather than to factors outside their control" (Dickinson, 1995, p. 173-74).

A further set of influential factors concern various *properties* of the selected goal, such as *goal specificity, proximity, goal harmony/conflict,* and *the level of aspiration*. *Goal specificity* refers to how clear and elaborate goal specifications are. Locke and Kristof (1996) provide evidence that goals that are specific rather than vague enhance performance. A second important characteristic of goals is their *proximity*. In terms of time scale, goals range in time from those that are nearly immediate to those that are several months or years away. As Karniol and Ross (1996) summarise, a "positive time preference" (p. 603) can be observed, with the motivational pull of goals with immediate outcomes being stronger than that of goals in a temporal distance because it is easier to judge progress toward the former. Furthermore, the power of distal goals, even if they are selected for action, may spontaneously decrease more rapidly during goal pursuit than that of proximal goals, and it is also easy to postpone pursuing a distal goal in the present in the belief that there is ample time to mount the effort later.

A further issue is that an individual may often wish to achieve a number of different goals at the same time, for example, acquire knowledge, meet people, and have a good time. With such multiple goals the extent of *goal harmony/conflict* is an important factor. If the various goals one entertains can coexist harmoniously, this will increase goal commitment, whereas if striving for a goal goes at the expense of a potential other, efforts towards this goal may eventually weaken as one thinks about alternatives (Green, 1995). A final goal property that is of great importance with complex learning targets such as the mastery of L2 proficiency is the *level of aspiration*. In our case this variable is not so much related to concepts like goal level or goal difficulty as to the

ultimate level of L2 proficiency the learner intends to reach. Not everybody sets out to attain a near-native level of L2 competence: some learners, for example, only aim to acquire a working knowledge of the L2, which obviously effects their long-term achievement strivings (cf. Dörnyei, 1990).

As was said earlier, the development of an action plan is an imperative to forming a fully operational intention. This is why the *availability of task opportunities and options* is an important, though not indispensable, motivational condition. It is easy to see that one may be more inclined to decide on a certain course of action where ready-made options are given than on an activity for which creating the necessary conditions already requires considerable effort. For example, an advert drawing attention to an attractive language course may be more influential in initiating language learning than a situation in which the learner needs to find out from scratch what channels of learning, if any, are available. As Heckhausen (1991) argues, "The decision [of initiating action] is frequently predetermined by anticipated opportunities that seem favorable for the realization of particular intentions" (p. 11); indeed, it is this recognition that underlies the provision of vocational information to learners before they commit themselves to a certain career path.

Another, equally important, determinant of the quality of the action plan one develops is the *learner's beliefs about L2 learning*, *knowledge of learning strategies*, and sufficient *domain-specific knowledge*. These factors form influential predispositions in the learners about the learning process, stemming from the learners' families, peer groups, and prior learning experiences. For example, If someone thinks of the study of a language only as tedious and hard work characterised by endless memorisation of bilingual word lists, this will obviously reduce his/her initial enthusiasm, whereas an informed, 'made to measure' action plan (e.g. a computer devotee deciding to learn through specially designed computer games) might give the necessary incentive to engage in the learning process.

Finally, in certain cases commitment does not happen even if many of the above mentioned motivational influences are in place—at such times what we need is a final 'push', such as some sort of *urgency*, powerful *external demands*, or a *unique opportunity*. In Heckhausen and Kuhl's (1985) words,

Commitment, however, does not appear to be a necessary result of the belief that attainment of a goal is desirable. Even a high product of value and expectancy may not be sufficient to produce a commitment. A unique opportunity or increased urgency—in the face of an approaching deadline—may represent an additional requirement for a commitment for future action (i.e. for generating an intention). (p. 136)

The initiation of intention enactment: Crossing the 'Rubicon' of action

It is not always the case that intentions are implemented immediately after their formation; quite frequently there is some delay before action takes place, and, as argued earlier, in certain cases even fully operationalised intentions never reach the actional phase. This indicates that there is a separate processing phase between intention formation and action: the *initiation of intention enactment*. This is not to be confused with intention formation, which concerned the actual decision whether to do a certain thing; here the main question is finding the right point in time for actualising the intention to act, particularly with respect to seeking and utilising suitable opportunities and the preparation of appropriate steps for implementation. Table 3 presents the main motivational influences that affect this action initiation phase.

Table 3. Motivational influences on the initiation of intention enactment

---

- Action vs. state orientation
- Perceived behavioural control
- Distracting influences and obstacles; number and strength of competing action tendencies
- Perceived consequences for not acting

As Kuhl (1994) argues, people often do, or perhaps more importantly fail to do, things without any available 'rational' explanation to derive from the information that underlay the selection of the intention. In order to explain such irrational failure to

enact an intention and thus to bridge the gap between choice and action, Kuhl introduces the constructs of *action versus state orientation*, which we have already described when summarising his theory. State oriented people tend to be hindered by "intrusive thoughts about bugs, slips in strategy, and failure" (Boekaerts, 1994, p. 434); they often procrastinate and tend to ruminate on acting rather than getting down to it. Those with action orientation, on the other hand, are more disposed to act their intentions out. Thus, action and state orientations differ from achievement tendencies such as need for achievement and fear of failure in that they concern the effectiveness or impairment of the control of action implementation rather than the formation of intentions.

A second variable affecting the enactment of an intention is the person's *perceived behavioural control*. In Ajzen's (1988) theory of planned behaviour this component is one of the key variables (along with intention) predicting behavioural performance. It refers to the perceived ease or difficulty of performing the behaviour; simply stated, one must believe that he/she has sufficient control over the outcome to exert effort towards achieving it.

There are also some negative forces working against intention enactment. These may be caused by various *distracting influences and obstacles*, which obviously stand in the way of action implementation, particularly if there are powerful *competing action tendencies* available. In situations in which the efficient implementation of an intention is rather difficult or requires too much time to seize the best opportunity, even relatively strong intentions may easily be downgraded in terms of priority and the execution of a competing action alternative may occupy attentional capacity.

Finally, should one be inclined to abandon the enactment of an intention due to some of the above difficulties, there is one more powerful factor that comes into force, potentially making the person think again: the *perceived consequences for not acting*. Even if everything seems to work against pursuing an intention, the feeling that "I simply cannot *not* do it!", that is, shifting the perspective from what it takes to reach the target to what will happen if it is not reached, may provide the necessary impetus to instigate action.

Actional processes

Once an initial wish has 'obtained' sufficient motivational support to pass all the hurdles, the individual is ready to embark on a course of action. The intensity of the 'action-launching impulse' will depend on the cumulative or resultant force of all the motivational influences active in the pre-actional phase (i.e. *'instigation force'*). As stated earlier, crossing the metaphorical 'Rubicon' of action opens a whole new chapter in the motivation scene; indeed, only few of the motivational influences associated with the actional phase in Table 4 appeared earlier in relation to preactional events. Not surprisingly, the biggest group of factors concerns the appraisal system and the outcome of the appraisal process. The rest of the components concern the effectiveness of the action control processes, the impact of external influences such the teacher's role, and factors inherent to the action itself.

The functioning of the appraisal system is greatly affected by the individual's *selective sensitivity to aspects of the environment*. As Boekaerts (1987) points out, learners give different weights to specific segments of the task-situation complex. Based on the learners' idiosyncratic features and past experiences, they may encode certain aspects of the learning environment in a strikingly different manner. For example, what one person may find stressful, another may find challenging. For a review of the various psychological factors that might underlie individual differences in the learners' perception and interpretation of the environment, the reader is referred to a recent summary by Ehrman and Dörnyei (1998). A second, partly related factor affecting the appraisal system is the *quality of the internal model of reference* (Boekaerts, 1988). In order to be able to interpret the learning context, the task demands, and one's own competence to meet these demands, learners draw on an internally generated model made up of "declarative, procedural and episodic information … activated from long-term memory upon confrontation with a learning task" (Boekaerts, 1988, p. 275). This internal model acts as a frame of reference and functions as a performance standard in defining what success and failure entails in a particular situation. It also provides a sound basis for selecting, constructing, and monitoring strategies and subtasks.

Table 4.   Executive motivational influences

- Selective sensitivity to aspects of the environment
- Quality of internal model of reference
  - action schemata
  - performance standards
- Quality of learning experience
  - novelty
  - pleasantness
  - goal/need significance
  - coping potential
  - self and social image
- Perceived contingent relationship between action and outcome; perceived progress
  - success
  - "flow"
- Sense of self-determination/autonomy
- Teacher's and parents' motivational influence
  - autonomy supporting vs. controlling
  - affiliative motive
  - direct socialisation of motivation
    - modelling
    - task presentation
    - feedback
- Performance appraisal, reward structure, classroom goal structure (competitive. Individualistic, cooperative)
- Influence of learner group (goal-orientedness, cohesiveness, norm and role system, peer role modelling), classroom climate, and school environment
- Task conflict; competing action tendencies; other distracting influences; availability of action alternatives
- Costs involved and natural tendency to lose sight of goal and get bored/tired of the activity
- Knowledge of and skills in using self-regulatory strategies
  - language learning strategies
  - goal setting strategies
  - action maintenance strategies
- Perceived consequences of action abandonment

The next group of factors affecting the results of the appraisal process are the actual stimuli generated by the environment, that is, the perceived *quality of the learning experience*. According to Schumann's (1998) neurobiological model of stimulus appraisal, the brain evaluates the stimuli it receives along five dimensions: *novelty* (degree of unexpectedness/ familiarity), *pleasantness* (attractiveness), *goal /need significance* (whether the stimulus is instrumental in satisfying needs or achieving goals), *coping potential* (whether the individual expects to be able to cope with the event), and *self and social image* (whether the event is compatible with social norms and the individual's self-concept). The five dimensions capture well the various situation-specific appraisals proposed in the L2 literature (e.g. Crookes & Schmidt's, 1991, system made up of interest, relevance, expectancy, and satisfaction, also adopted by Dörnyei, 1994), as well as covering several of the most important current issues in the educational psychological literature (e.g. the concern about self-esteem/self-worth, self-efficacy, intrinsic interest, well-being). For example, based on her extensive classroom research, Boekaerts (1994) identified three types of appraisals to explain much of the variance in learning intention: (1) task attraction, (2) perceived personal relevance, and (3) perceived self-competence. Schumann's model covers all the three components. In a more detailed summary of the main aspects of the task-situation complex from the pupils' point of view, Boekaerts (1988) also listed familiarity judgement, success expectancy judgement, reward value judgement, perceived teacher utility judgement, and peer success expectancy in addition to the above factors. Only the last two components are not directly covered by Schumann's proposed appraisal dimensions, but they can be seen as being subsumed by the other components. However, in order to emphasise the social nature and aspects of classroom learning, we have also separated peer and teacher appraisals from the more general appraisal of the course and the curriculum (see below).

Because learning is a goal-oriented activity, *the perceived contingent relationship between action and outcome* and the *perceived progress* the learner has made on this contingent path deserves explicit treatment. Students constantly evaluate how well they are doing in terms of approaching the desired outcome, and if they feel that their action is conducive to reaching that outcome they experience a feeling of success, which then provides further motivation. In Boekaerts's (1988) words,

> When a learner perceives a contingent path between his potential actions and the learning outcome, his confidence will be high and his performance will not be impeded by debilitating anxiety. When the opposite relation holds, mental withdrawal from the threatening demands may result as well as the perception of discomfort and tension. (p. 275)

A particularly powerful state of optimal experience is the concept of 'flow' introduced by Csikszentmihalyi (1990). It represents a state of total involvement during some creative activity that is characterised by an equilibrium between the amount of challenge in activities and the individual's capabilities.

A further powerful factor regarding learning experiences that was already mentioned with respect to the intention formation stage is the learner's *sense of self-determination/autonomy*. The issue of the type of regulation seems to be one of the most pervasive ones during the motivated behavioural process; this underlies Deci and Ryan's (1985) claim that the need for autonomy, that is, the desire to be self-initiating and self-regulating of one's actions, is an innate human need, and is a prerequisite for any behaviour to be intrinsically rewarding (indeed, Csikszentmihalyi's, 1990, 'flow' also presupposes a primarily intrinsically regulated behavioural sequence).

Besides the learner, there are certain other key figures affecting the motivational quality of the learning process, namely the *teacher* and the *parents*. Their role as motivational socialisers has been described in detail by a number of works in the literature (e.g. Colletta, Clément & Edwards, 1983; Dörnyei, 1994; Gardner, 1985, Gottfried, Fleming & Gottfried, 1994). Teachers are the officially designated leaders within the classroom; as such they are the most visible figures, who embody group conscience and serve as a reference and a standard. They are often the focus of attention and, as Jesuíno (1996) summarises, they function as an "emotional amplifier of the group whose appeals and example are critical for mobilising the group" (p. 115) In short, "To lead is to motivate, that is, 'directing' and

'energizing' " (p. 114). One of the main impacts teachers and parents exert is related to self-determination, as several studies have found that these authority figures' motivational practices can be described along a continuum between autonomy-supporting versus controlling (e.g. Gottfried et al. 1994; Noels, Clément & Pelletier, in press). Another important motive related to these superordinate figures is the 'affiliative motive', which refers to students' need to do well in school in order to please the teacher or their parents. Finally, teachers can also exert a direct motivational influence by actively socialising the learners' motivation through appropriate modelling, task presentations, and their feedback.

One particularly featured aspect of how teachers structure classroom life is the type of *performance appraisal*, *reward structure*, and the more general *classroom goal structure* they introduce. It is well documented in the literature that these have far reaching and often unintended consequences on how learners approach the learning tasks (e.g. Ames, 1992; Maehr, 1984; Pintrich & Schunk, 1996). Harter (1992), for example, found that the combination of comparative grading practices, standardised test scores, a focus on the correct solutions, and the salience of social comparison, serve to decrease children's interest in and enjoyment of the learning process and moderate their preference for challenge. Cooperation in the classroom, on the other hand, has been shown to augment motivation to learn (e.g. Dörnyei, 1997; Sharan & Shaulov, 1990; Slavin, 1996).

Parents and teachers are not the only external sources of situation-specific motivation. An increasing body of research has highlighted the influence of the *learner group*, the *classroom climate*, and the *school environment*. Learners do not exist in isolation but function within organisational structures through socially mediated effort. Therefore, various aspects of the dynamics of the learner group (e.g. goal-orientedness, cohesiveness, the emerging classroom role and norm system, peer role modelling; for a review, see Ehrman & Dörnyei, 1998) have a profound influence on the individual members' motivation as they try to conform to social standards set by the class group and the school. Our belief is that the significance of these factors has not been sufficiently highlighted in the motivational literature relative to their importance, although, as Dörnyei (1998) summarises, several studies in social and educational psychology have

recently looked into group-specific cognitive constructs (like group efficacy). Recent studies suggest that the psychological environment of the school as a whole (e.g. school-wide stress on accomplishment, power, recognition, affiliation; school-level authority and management structures, grouping and evaluation practices) may also have a strong influence on students' motivation (Maehr & Midgley, 1991). For example, Anderman and Maehr (1994) report on a study which demonstrated that school effects such as the above seem to increase with grade level: whereas in the 4th grade these explained 7% of the variance in motivation, the figure grew to 21% when students reached the 10th grade.

It probably requires little justification that *task conflict*, *competing action tendencies*, *other distracting influences*, and the *availability of action alternatives* have a weakening effect on the resultant motivational force associated with the particular course of action. In such cases, unless effective action control strategies are activated (see below), the behavioural process may be interrupted and in some cases terminated. Further negative influences are provided by the *costs* involved in pursuing the activity (a factor already mentioned at the intention formation phase) and one's *natural tendency to lose sight of goal and get bored/tired of the activity;* these factors have been part of what Atkinson and Birch (1974) termed 'consummatory force' in their 'Dynamic Action Model'.

An important source of scaffolding and enhancing motivation is the *knowledge of and skills in using self-regulatory strategies*. Winne (1995) argues convincingly that all learners inherently self-regulate, but there are individual differences regarding their knowledge base about self-regulatory learning and their knowledge about when to engage that knowledge and their skills. We already stated in the introduction that in sustained learning of skills and knowledge, self-regulatory processes take on special significance as key motivational influences on learning and performance (Kanfer, 1996). As mentioned earlier, we distinguish three types of such strategies: l*earning*, *goal setting*, and *action maintenance strategies*.

By using *learning strategies*, a learner already demonstrates motivation, since they involve processes whereby the learner voluntarily activates cognitions/behaviours/affects (depending how one defines learning strategies) in order to increase the effectiveness of his/her own learning (in-

deed, Corno, 1993, p. 17, for example, refers to them as "mindful effort investments"). The fact that learning strategies enhance achievement generates positive affect in the learners about how and what they study, thereby reinforcing their motivated disposition.

Goal-setting strategies are more directly related to motivation. Goals are not only outcomes to shoot for but also standards by which to evaluate one's performance. Thus, goal setting refers to establishing quantitative and qualitative standards of performance that can help guide and regulate action better than distal, vague, or 'do-your-best' kind of goals. In the case of long-lasting, continuous activities such as language learning, where there is only a rather distal goal of task completion (i.e. mastering the L2), the setting of *proximal subgoals* (i.e. short-term objectives, such as taking tests, passing exams, satisfying learning contracts) may therefore have a powerful motivating function in that they mark progress and provide immediate incentive and feedback. Winne (1995) points out that although it may appear relatively simple to train students to set more and more precise objectives, their 'stylistic dispositions' to set such objectives for themselves may constitute an important individual difference variable.

Finally, *action maintenance strategies* are specifically directed at maintaining motivation and protecting the currently active intention. This reactive, protection function is of particular significance because, as Atkinson and Birch (1974) emphasised, there are many action tendencies awaiting implementation at a given point of time and even during the course of a seemingly smoothly running activity the opportunity to pursue other attractive activities can suddenly surface. Action maintenance strategies are also useful with distal goals to help individuals to maintain their priorities in the face of temptation and adversity.

During the last decade quite an array of action maintenance strategies have been documented in the literature. We have already described Kuhl's (1987) system of six major types of self-regulatory strategies. Adapting this conceptualisation to educational contexts, Corno (1993) distinguishes two large classes of "volitional control strategies" (the term she uses for action maintenance and goal-setting strategies): *motivation control* and *emotion control strategies*. Examples of the former are

"Set contingencies for performance that can be carried out mentally (e.g. self-reward; self-imposed penance", "Escalate goals by prioritising and imagining their value", and "Visualise doing the work successfully"(p. 16). Emotion control strategies include "Generate useful diversions", "Visualise the work successfully and feeling good about that (change the way you respond emotionally to the task", "Recall your strengths and your available resources", and "Consider any negative feelings about the experience and ways to make it more reassuring" (p. 16).

Baumeister (1996) emphasises the aspect of action maintenance strategies that provides people with powerful motivational forces to enable them to regulate the cognitive and emotional impact of ego threats. By consciously ignoring face-threatening stimuli, by adopting 'defensive preoccupation' (i.e. focusing on an alternative stimulus that can absorb attention), by summoning positive feelings/happy memories to defuse the threat, or by constructing their narratives of events so as to place themselves in a more positive light, people may self-regulate cognitive processes and thus protect their self-esteem from threatening implications. Garcia and Pintrich (1994) highlight one particular strategy that serves to maintain self-worth, 'self-affirmation': If an individual experiences a negative evaluation of the self in a valued domain, a self-affirmative process is initiated, and the individual will "seek to affirm a positive global evaluation of the self by activating positive conceptions of the self (those in other, equally valued domains)" (p. 137).

Just like in the preactional phase, the last motivational factor to be listed here is the *perceived consequences of action abandonment*. It is sometimes only when everything else fails and one is about to quit, that one thinks over what action abandonment would really entail, and the perceived possible negative consequences may activate enough energy to keep going.

Postactional evaluation

In our model we distinguished four major motivational influences active in the postactional phase: *attributional factors*, *self-concept beliefs*, the quality and quantity of *evaluational/attributional cues and feedback*, and *action versus state orientation* (Table 5).

Table 5. Motivational influences on post-actional evaluation

- Attributional factors: attributional style and biases, prior knowledge about "scripted" events
- Self-concept beliefs: self-confidence/self-efficacy; self-competence; self worth; prior performance history
- Evaluational/attributional cues, feedback
- Action vs. state orientation

The key tenet of attribution theory is that the perceived causal attributions of past successes and failures (i.e. inferences about why outcomes occur) have behavioural consequences on future achievement strivings. As Graham (1994) summarises, the most common attributions in school environments are those to ability (including both aptitude and acquired skills), effort, task difficulty, luck, mood, family background, and help or hindrance from others. Among these, ability and effort are the most dominant perceived causes in the Western culture. In Weiner's (1992) model, causal attributions can be categorised along three dimensions: *stability* (the cause is constant or varying over time), *locus* (the cause is internal or external to the person), and *control* (whether or not the cause is subject to volitional control). It has been shown in several studies that the type of attribution one makes directly affects the person's future behavioural outcome expectancies. Failure that is ascribed to stable and uncontrollable factors such as low ability hinders future achievement behaviour more than failure that is ascribed to unstable and controllable factors such as effort. Evidence for the importance of attribution to effort in secondary school pupils' motivation complex has been provided by Boekaerts (1988), who found that seeing effort as an important causal factor in gaining progress (i.e. realising that effort pays off) significantly contributed to the students' willingness to devote processing capacity to learning tasks in her sample.

There are considerable individual differences in forming attributions. First, people have different *attributional styles*, that is, a habitual way of explaining events along one rather than the other attribution dimensions, which develops as a result of multiple experiences with those events. For example, some people, usually labelled as 'internals', tend to perceive a direct link between their behaviour and reinforcement, whereas 'externals' tend not to see such a contingency (and thus are likely to make external kind of attributions). Perhaps the best-known stylistic disposition is 'learned helplessness', referring to an acquired resigned, pessimistic, and helpless state that, once established, is very difficult to reverse.

Second, in certain situations people may also have *attributional biases*, that is, incorrect schemas and inference rules that are used to make attributions (Pintrich & Schunk, 1996). Examples include the self-serving bias (the tendency to take responsibility for success but deny it for failure); the self-centred bias (the tendency to take more than due responsibility for any outcome); or basic attribution errors such as the tendency to attribute something to dispositional or personal factors while ignoring relevant (or even crucial) situational factors, and vice versa.

Third, as Weiner (1984) points out, attributional search is not indiscriminately displayed in all situations, for this would place great cognitive strain on the individual. Rather, causal searches are more prominent in the case of unexpected outcomes that do not conform with the 'scripts' of what are seen as normal events and situations (e.g. failure when success was anticipated or unfulfilled desires); it seems reasonable to assume, then, that differences in the *prior knowledge about scripted events* will also cause individual differences in the attribution process.

Self-concept beliefs, including one's established level of *self-confidence/self-efficacy, self-competence*, and *self-worth* in different domains, also influence the result of postactional evaluation. Learners with relatively high self-perceptions handle occasional failures much better than learners with low self-worth beliefs in that they tend to heighten and sustain effort in the face of failure, while mobilising new strategies to tackle the task. Confident learners are also less likely to engage in debilitating self-analysis rather than maintaining a task-focus. It needs little justification that the individual's *prior performance history* plays an important role in shaping these self-beliefs.

So far we have concentrated on the learner-internal factors affecting postactional evaluation, but the process is also a function of external *evaluational/ attribu-*

tional cues. Of all the attributional cues in classroom contexts, the most featured one from the learners' point of view is the *feedback* from the teacher, including subtle emotional responses. An often mentioned distinction of two types of feedback involves 'informational feedback', which comments on competence, and 'controlling feedback', which judges performance against external standards (Brophy & Good, 1986). It is generally maintained that from a motivational point of view the former should be dominant since social comparison is considered most detrimental to intrinsic motivation (Ames, 1992). Graham (1994) talks about three more subtle feedback types whose negative impact on learner behaviour has been confirmed by laboratory research: communicated pity instead of anger after failure; the offering of praise after success (particularly for easy tasks); and unsolicited offers of help (particularly 'gratuitous help' such as supplying answers outright). All the three feedback practices are often related to low self-concept of competence; of these, the mention of praise might be most surprising, but interestingly, as Graham summarises, it is blame and criticism rather than praise that often conveys to the learners the teacher's high expectations. Indeed, Paris and Turner (1994) also point out that students may interpret success that comes without challenge or risk-taking as an indication of the lower expectations held by others for their own level of achievement. One well-known effect of teachers' feedback behaviour is the 'Pygmalion effect', when teacher expectations of their students' rate of progress functions as a self-fulfilling prophecy, with the learners living up (or down) to these expectations regardless of their actual learning potential.

Finally, although one might think that nothing could be simpler than abandoning an action, this is not always the case. As Beckmann (1994: 159-60) argues, "sometimes it is just as difficult to stop executing an activity which does not seem to be very promising any longer and initiate another more promising action". People are known to get stuck in unfruitful behavioural sequences, unable to 'cut their losses', and this is why Kuhl has extended the concepts of *action vs. state orientation* (described earlier) to apply to the "disengagement from an intention and the initiation of a new course of action in situations in which the intention has become unattainable or in which changing conditions require a change in the goal hierarchy" (Kuhl & Goschke,

1994, p. 95).

Limitations of the model

The Process Model presented in this paper is not without limitations. The issues that will be briefly summarised in the following all concern areas that have not been given sufficient attention in psychological research and therefore require further investigations to resolve them.

Unconscious/irrational motives. One of the most prevailing issues in motivational psychology is the question of how conscious or unconscious the motivational determinants of human behaviour are (the issue has, in fact, come up under a number of different labels, with non-conscious motives referred to as unconscious, non-cognitive, automatic, instinct/drive-driven, socially/behaviourally-conditioned, etc.). This issue as a whole reaches far beyond the scope of this paper but it may be worth summarising our current stance regarding conscious vs. non-conscious motives. Classroom events are varied and complex, and there is no doubt that there are a number of unconscious/irrational factors that underlie (motivate and demotivate) student behaviour; for example, as Weiner (1984) summarises, "self-esteem is defended in unknown ways; expectancies are biased; illogical decisions are reached; information is improperly utilized; and there is gross personal delusion" (p. 18). Furthermore, although Freud's emphasis on the unconscious, sexual motivation may not be completely relevant to learning activities, classroom events often have certain sexual undertones. In a review of the conscious/unconscious issue, Sorrentino (1996) supports the importance of nonconscious forces by arguing that behaviour *can* happen without reference to conscious thought, although cognitions can inhibit or further instigate such behaviour and can also strengthen or weaken other competing action tendencies. As he concludes, research evidence leaves "little room for those who believe that all behaviour must be preceded by conscious thought" (p. 635).

On the other hand, it is also clear that many aspects of student behaviour are quite logical and rational. This is especially true if we consider learning behaviours and sustained learning processes in particular—

as Bandura (1991) asserts, "most human behaviour is activated and regulated *over extended periods* by anticipatory and self-reactive mechanisms" (p. 71; emphasis ours). Psychology is currently dominated by a primarily cognitive approach, and there is a covert agreement among most researchers that most of the significant thoughts and feelings that affect learning achievement are conscious and known by the learner. While we tend to agree with this assumption, there are two areas that we feel should be given more attention: the impact of the individuals' *mood states* and the role of *unconscious interpersonal processes*. In a thought-provoking article, Schwarz and Bohner (1996) draw attention to the fact that depending on what mood people are in, they tend to find goals more or less attractive, tend to assess their own resources and the situation in a more or less favourable way, and tend to evaluate their performance as more or less satisfactory. This is, in fact, well-known to many classroom practitioners, yet little controlled research has been done to understand the exact nature of such mood-related biases. With regard to interpersonal relations, psychoanalytic theory has provided ample evidence that these are often affected by unconscious 'scripts' (such as transference, projections, defence mechanisms, etc.; for a review, see Ehrman & Dörnyei, 1998). Since we believe that classroom learning is an intensely interpersonal process, unconscious relationship patterns inevitably influence the class members' achievement and performance, which warrants further research into this direction.

Simultaneous action. Our Process Model appears to suggest that the actional process occurs in relative isolation, without any interference from other ongoing behaviours the actor is engaged in (the only indication of this not being the case was provided by the inclusion of factors such as goal conflict and competing action tendencies). This is obviously not true in the strict sense. As Atkinson and Birch (1974) highlighted over two decades ago,

> the behavioral life of an individual is a continual stream of thought and action, characterized by change from one activity to another, from birth until death. There are no behavioral vacuums except, of course, when an individual is literally unconscious for reasons of illness or accident and incapable of

behaving at all. Otherwise, the individual is always doing something. *A simple change from one activity to another poses the fundamental problem for a psychology of motivation.* (p. 271)

While people tend to pursue a limited number of actions at a time within the behavioural stream (and particularly when sustained learning is concerned) various action episodes can be simultaneously active. For example, a new action may be initiated while the success of the previous action is still being evaluated. This raises the question of whether we can talk about a purely 'preactional' phase of the motivational process or whether preactional and actional phases overlap in a complex manner. Baumeister (1996) offered a precise summary of this issue:

> Perhaps, then, the function of mental, emotional, and motivational processes is not so much to initiate behaviour as to steer it—that is, to intervene in ongoing behavioral processes so as to interrupt, override, or redirect them... Cognitive and motivational processes may guide action in a way that resembles changing the channel on a television set more closely than it does turning the set on in the first place. (p. 28)

Multiple goals and goal hierarchies. Motivation to learn and learning achievement in a school context are the product of a complex set of interacting goals and intentions. For example, as mentioned earlier, by enrolling in a course, one may want to acquire knowledge, meet people, and have a good time at the same time. Such multiple goals often form hierarchies, including superordinate and subordinate goals, similarly to the need hierarchies by Maslow (1970) or Murray (1938). In Bandura's (1991) words, "The complementary regulation of motivation by hierarchical goals of differential achievability characterizes most of the strivings of everyday life" (p. 101). It is still to be decided how superordinate and subordinate goals interact with each other (i.e. override or reinforce each other) and how they can simultaneously be placed in an action sequence process.

Task-specific motivation. We have mentioned earlier that a characteristic feature of school environments is that goals and corresponding tasks are not chosen

voluntarily by the students but are very often assigned to them, and in such cases it makes more sense to talk about compliance rather than commitment. This being the case, task-specific motives may have more significance in the motivation complex than our model suggests. Imposed tasks may be seen not merely as contributors to the general quality of the learning experience (as our model suggests) but also as being associated with the general power structure of the classroom as a social unit (since compliance is dependent on the perceived power base of the authority figure assigning the task). Although we are sensitive to the significance of the social psychological organisation of the learning environment (cf. Ehrman & Dörnyei, 1998), because of space limitations we have not gone into details regarding issues such as leadership types, the bases of social influence, or the manner in which leadership is exercised and tasks are assigned.

What is motivation?

Having surveyed a great variety of approaches to and aspects of the notion of 'motivation', and having set up a construct detailing what we see as the main components of the motivation complex, it is time to take stock of what this suggests about the nature and definition of motivation. This is no easy task if we do not want to restrict the definition to superficial generalisations; in order to capture the multiple aspects and dimensions represented in Figure 1, we need a relatively complex formulation. Heckhausen (1991) sees motivation as a

> global concept for a variety of processes and effects whose common core is the realization that an organism selects a particular behaviour because of expected consequences, and then implements it with some measure of energy, along a particular path. (p. 9)

Separating various levels of motivation, Bandura (1991) provided the following definition:

> Motivation is a general construct linked to a system of regulatory mechanisms that are commonly ascribed both directive and activating functions. At the generic level it encompasses the diverse classes of events that move one

to action. Level of motivation is typically indexed in terms of choice of courses of action and intensity and persistence of effort. Attempts to explain the motivational sources of behaviour therefore primarily aim at clarifying the determinants and intervening mechanisms that govern the selection, activation, and sustained direction of behaviour toward certain goals. (p. 69)

Although the two definitions (by Heckhausen and Bandura) cited above do provide an appropriate reflection of the complexity of motivation, and they also emphasise certain process-oriented elements, they do not highlight sufficiently the dynamic character of motivation in sustained learning activities. As outlined in this article, the motivational forces that are at work during the preactional phase accumulate in the combined *instigation force*, the degree of which determines the intensity of the initial action commitment. This initial force will be increased or decreased by additional forces that come into play during action engagement, and the postactional evaluation of the actional outcome has a forward pointing role as it is contributing to the motivational base of further action. Thus, in a general sense, motivation can be defined as the *dynamically changing cumulative arousal in a person that initiates, directs, coordinates, amplifies, terminates, and evaluates the cognitive and motor processes whereby initial wishes and desires are selected, prioritised, operationalised, and (successfully or unsuccessfully) acted out.*

Conclusion

The theory presented in this chapter is not novel in the sense that it offers radically new insights. Rather, it is a synthesis that attempts to integrate propositions and models from several sources into a more comprehensive scheme. Our goal was to construct a framework which is based on sound theoretical foundations and which is at the same time useful for practitioners. We are aware that the discussion has been highly theoretical and at points speculative. We can see two obvious ways to verify the propositions made: (a) by formally assessing the construct validity of the model and (b) by testing whether the interventions based on this model turn out to be effective in

enhancing learner motivation. In our future research we will proceed along these lines.

Adopting a process model of motivation such as the one described above offers considerable potential practical gains. It helps us to understand the main stages of action initiation and enactment, highlighting the forces that can enhance the intensity of the process. It also describes how various action control mechanisms can consciously be applied in order to maintain, enhance, and protect ongoing action. The model offers a unified framework in which the impact of various types of self-regulatory strategies (cognitive, metacognitive, affective, and social) can be interpreted and compared. Finally, by listing the motivational influences in a comprehensive manner and by specifying which concrete phase of the motivational process they are related to, the framework can serve as a structures basis for designing motivational strategies to be used in the classroom.

To summarise, the above overview of the phases of the motivational process, along with the multiple components energising it, attest to the fact that the issue is greatly complex. A broad array of mental processes and motivational conditions play essential roles in determining why students behave as they do. Having reviewed the numerous components, it is difficult to imagine that by focusing on only a few selected factors (as is done in various reductionist paradigms) we would be able to explain a large enough proportion of variance in motivated learning behaviour. Therefore, we are in complete agreement with Graham's (1994) concluding words:

> If there is one message I wish to convey with what has been presented in this chapter, that message is that classroom motivational life is complex. No single word or principle such as reinforcement or intrinsic motivation can possibly capture this complexity. (p. 47)

References

Ajzen, I. (1988). *Attitudes, personality, and behaviour*. Chicago: Dorsey Press.

Alison, J. (1993). *Not bothered? Motivating reluctant language learners in Key Stage 4*. London: CILT.

Ames, C. (1992). Classrooms, goals, structures, and student motivation. *Journal of Educational Psychology, 84,* 267-271.

Anderman, E. M., & Maehr, M. L. (1994). Motivation and schooling. *Review of Educational Research, 64,* 287-309.

Atkinson, J. W., & Birch, D. (1974). The dynamics of achievement-oriented activity. In J. W. Atkinson & J. O. Raynor (Eds.), *Motivation and achievement* (pp. 271-325). Washington, DC: Winston & Sons.

Atkinson, J. W., & Raynor, J. O. (Eds.) (1974). *Motivation and achievement.* Washington, DC: Winston & Sons.

Bandura, A. (1991) Self-regulation of motivation through anticipatory and self-reactive mechanisms. *Nebraska Symposium on motivation 1990, 39.* 69-164.

Baumeister, R. F. (1996). Self-regulation and ego threat: Motivated cognition, self-deception, and destructive goal setting. In P. M. Gollwitzer & J. A. Bargh (Eds.), *The psychology of action: Linking cognition and motivation to behaviour* (pp. 27-47). New York: Guilford Press.

Beckmann, J. (1994). Volitional correlates of action versus state orientation. In J. Kuhl & J. Beckmann (Eds.), *Volition and personality: Action versus state orientation* (pp. 155-166). Seattle, WA: Hogrefe & Huber.

Boekaerts, M. (1987). Individual differences in the appraisal of learning tasks: An integrative view of emotion and cognition. *Communication & Cognition, 20,* 207-224.

Boekaerts, M. (1988). Motivated learning: Bias in appraisals. *International Journal of Educational research, 12,* 267-280.

Boekaerts, M. (1994). Action control: How relevant is it for classroom learning? In J. Kuhl & J. Beckmann (Eds.), *Volition and personality: Action versus state orientation* (pp. 427-435). Seattle, WA: Hogrefe & Huber.

Boekaerts, M. (1995). Self-regulated learning: Bridging the gap between metacognitive and metamotivation theories. *Educational Psychologist, 30,* 195-200.

Brophy, J. E. (1987). Synthesis of research on strategies for motivating students to learn. *Educational Leadership, 45/2,* 40-48.

Brophy, J. (1998). *Motivating students to learn.* Boston, MA: McGraw-Hill.

Brophy, J. E., & Good, T. L. (1986). Teacher behaviour and student

achievement. In M. C. Wittrock (Ed.), *Handbook of research on teaching* (3rd ed., pp. 328-375). New York: Macmillan.

Brown, H. D. (1994). *Teaching by principles*. Englewood Cliffs, NJ: Prentice Hall.

Burden, P. R. (1995). *Classroom management and discipline*. New York: Longman.

Colletta, S. P., Clément, R., & Edwards, H. P. (1983). *Community and parental influence: Effects on student motivation and French second language proficiency*. Québec: International Center for Research on Bilingualism.

Corno, L. (1993). The best-laid plans: Modern conceptions of volition and educational research. *Educational Researcher, 22,* 14-22.

Crookes, G., & Schmidt, R. W. (1991). Motivation: Reopening the Research Agenda. *Language Learning, 41,* 469-512.

Cranmer, D. (1996). *Motivating high level learners*. Harlow: Longman.

Csikszentmihalyi, M. (1990). *Flow: The psychology of optimal experience*. New York: Harper & Row.

Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behaviour*. New York: Plenum.

Dibbelt, S. & Kuhl, J. (1994). Volitional processes in decision making: Personality and situational determinants. In J. Kuhl & J. Beckmann (Eds.), *Volition and personality: Action versus state orientation* (pp. 177-194). Seattle, WA: Hogrefe & Huber.

Dickinson, L. (1995). Autonomy and motivation: A literature review. *System, 23,* 165-174.

Dörnyei, Z. (1990). Conceptualizing motivation in foreign-language learning. *Language Learning, 40,* 45-78.

Dörnyei, Z. (1994). Motivation and motivating in the foreign language classroom. *Modern Language Journal, 78,* 273-284.

Dörnyei, Z. (1997). Psychological processes in cooperative language learning: Group dynamics and motivation. *Modern Language Journal, 81,* 482-493.

Dörnyei, Z. (1998). Motivation in second and foreign language learning. *Language Teaching, 31,* 117-135.

Dörnyei, Z. (in preparation). *Researching and teaching motivation*. Harlow: Addison Wesley Longman.

Dörnyei, Z., & Csizér, K. (1998). Ten commandments for motivating language learners: Results of an empirical study. *Language Teaching Research, 2,* 203-229.

Eccles, J. S., & Wigfield, A. (1995). In the mind of the actor: The structure of adolescents' achievement task values and expectancy-related beliefs. *Personality and Social Psychology Bulletin, 21,* 215-225.

Ehrman, M. M., & Dörnyei, Z. (1998). *Interpersonal dynamics in second language education: The visible and invisible classroom*. Thousand Oaks, CA: Sage.

Garcia, T., & Pintrich, P. R. (1994). Regulating motivation and cognition in the classroom: The role of self-schemas and self-regulatory strategies. In D. Schunk & B. J. Zimmerman (Eds.), *Self-regulation of learning and performance: Issues and educational applications,* (pp. 127-153). Hillsdale, NJ: Lawrence Erlbaum.

Gardner, R. C. (1985). *Social psychology and second language learning: The role of attitudes and motivation*. London: Edward Arnold.

Gollwitzer, P. M. (1990). Action phases and mind-sets. In E. T. Higgins & R. M. Sorrentino (Eds.), *Handbook of motivation and cognition: Foundations of social behaviour* (Vol. 2, pp. 53-92). New York: Guilford Press.

Good, T. L., & Brophy, J. E. (1994). *Looking in classrooms (6th ed.)*. New York: HarperCollins.

Gottfried, A. E., Fleming, J. S., & Gottfried, A. W. (1994). Role of parental motivational practices in children's academic intrinsic motivation and achievement. *Journal of Educational Psychology, 86,* 104-113.

Graham, S. (1994). Classroom motivation from an attributional perspective. In H. F. O'Neil, Jr. & M. Drillings (Eds.), *Motivation: Theory and research* (pp. 31-48). Hillsdale, NJ: Lawrence Erlbaum.

Green, R. G. (1995). *Human Motivation: A social psychological approach*. Pacific Grove, CA: Brooks/Cole.

Harter, S. (1992). The relationship between perceived competence, affect, and motivational orientation within the classroom: Processes and patterns of change. In A. K. Boggiano & T. S. Pittman (Eds.), *Achievement motivation: A social-developmental perspective* (pp. 77-114). Cambridge: Cambridge

University Press.

Heckhausen, H. (1991). *Motivation and action.* New York: Springer.

Heckhausen, H., & Kuhl, J. (1985). From wishes to action: The dead ends and short cuts on the long way to action. In M. Frese & J. Sabini (Eds.), *Goal-directed behaviour: The concept of action in psychology.* Hillsdale, NJ: Lawrence Erlbaum.

Jesuíno, J. C. (1996). Leadership: Micro-macro links. In E. H. Witte & J. H. Davis (Eds.), *Understanding group behaviour: Small group processes and interpersonal relations* (Vol. 2, pp. 93-125). Mahwah, NJ: Lawrence Erlbaum.

Jones, V. F., & Jones, L. S. (1995). *Comprehensive classroom management: Creating positive learning environments for all students (4th ed.).* Needham Heights, MA: Allyn and Bacon.

Kanfer, R. (1996). Self-regulatory and other non-ability determinants of skill acquisition. In P. M. Gollwitzer & J. A. Bargh (Eds.), *The psychology of action: Linking cognition and motivation to behaviour* (pp. 404-423). New York: Guilford Press.

Karniol, R., & Ross, M. (1996). The motivational impact of temporal focus: Thinking about the future and the past. *Annual Review of Psychology, 47,* 593-620.

Kuhl, J. (1987). Action control: The maintenance of motivational states. In F. Halish & J. Kuhl (Eds.), *Motivation, intention, and volition* (pp. 279-291). Berlin: Springer.

Kuhl, J. (1985). Volitional mediators of cognition-behaviour consistency: Self-regulatory processes and action versus state orientation. In J. Kuhl & J. Beckmann (Eds.), *Action control: From cognition to behaviour.* New York: Springer.

Kuhl, J. (1992). A theory of self-regulation: Action versus state orientation, self-discrimination, and some applications. *Applied Psychology: An International Review, 41,* 97-129.

Kuhl, J. (1994). A theory of action and state orientations. In J. Kuhl & J. Beckmann (Eds.), *Volition and personality: Action versus state orientation* (pp. 9-45). Seattle, WA: Hogrefe & Huber.

Kuhl, J., & Beckmann, J. (Eds.) (1994). *Volition and personality: Action versus state orientation.* Seattle, WA: Hogrefe & Huber.

Kuhl, J., & Goschke, T. (1994). A theory of action control: Mental subsystems, modes of control, and volitional conflict-resolution strategies. In J. Kuhl & J. Beckmann (Eds.), *Volition and personality: Action versus state orientation* (pp. 93-124). Seattle, WA: Hogrefe & Huber.

Locke, E. A., & Kristof, A. L. (1996). Volitional choices in the goal achievement process. In P. M. Gollwitzer & J. A. Bargh (Eds.), *The psychology of action: Linking cognition and motivation to behaviour* (pp. 363-384). New York: Guilford Press.

Locke, E. A., & Latham, G. P. (1990). *A theory of goal setting and task performance.* Englewood Cliffs, NJ: Prentice Hall.

Locke, E. A., & Latham, G. P. (1994). Goal setting theory. In H. F. O'Neil, Jr. & M. Drillings (Eds.), *Motivation: Theory and research* (pp. 13-29). Hillsdale, NJ: Lawrence Erlbaum.

Maehr, M. L. (1984). Meaning and motivation: Toward a theory of personal investment. In R. Ames & C. Ames (Eds.), *Research on motivation in education: Student motivation* (Vol. 1, pp. 115-144). San Diego, CA: Academic Press.

Maehr, M. L., & Midgley, C. (1991). Enhancing student motivation: A school-wide approach. *Educational Psychologist, 26,* 399-427.

Maslow, A. H. (1970). *Motivation and personality.* 2nd ed. New York: Harper and Row.

McCombs, B. L. (1994). Strategies for assessing and enhancing motivation: Keys to promoting self-regulated learning and performance. In H. F. O'Neil, Jr. & M. Drillings (Eds.), *Motivation: Theory and research* (pp. 49-69). Hillsdale, NJ: Lawrence Erlbaum.

McCombs, B. L. & Pope, J. E. (1994). *Motivating hard to reach students.* Washington, DC: American Psychological Association.

Murray, H. A. (1938). *Explorations in personality.* Oxford: Oxford University Press.

Noels, K. A., Clément, R., & Pelletier, L. G. (in press). Perceptions of teachers' communicative style and students' intrinsic and extrinsic motivation. *Modern Language Journal.*

Oxford, R. L., & Shearin, J. (1994). Language learning motivation: Expanding the theoretical framework. *Modern Language Journal*, *78*, 12-28.

Paris, S. G., & Turner, J. C. (1994). Situated

motivation. In P. R. Pintrich, D. R. Brown & C. E. Weinstein (Eds.), *Student motivation, cognition, and learning* (pp. 213-237). Hillsdale, NJ: Lawrence Erlbaum.

Pintrich, P. L., & Schunk, D. H. (1996). *Motivation in education: Theory, research, and applications*. Englewood Cliffs, NJ: Prentice Hall.

Raffini, J. P. (1993). *Winners without losers: Structures and strategies for increasing student motivation to learn*. Needham Heights, MA: Allyn and Bacon.

Raffini, J. P. (1996). *150 ways to increase intrinsic motivation in the classroom*. Needham Heights, MA: Allyn and Bacon.

Raynor, J. O., & Roeder, G. P. (1987). Motivation and future orientation: Task and time effects for achievement motivation. In F. Halisch & J. Kuhl (Eds.), *Motivation, intention, and volition* (pp. 61-71). Berlin: Springer.

Schneider, B., Csikszentmihalyi, M., & Knauth, S. (1995). Academic challenge, motivation, and self-esteem: The daily experience of students in high school. In M. T. Hallinan (Ed.), *Restructuring schools: Promising practices and policies* (pp. 175-195). New York: Plenum.

 Schumann, J. H. (1998). *The neurobiology of affect in language*. Oxford: Blackwell.

Schwarz, N. & Bohner, G. (1996). Feelings and their motivational implications: Moods and the action sequence.

Sharan, S., & Shaulov, A. (1990). Cooperative learning, motivation to learn, and academic achievement. In S. Sharan (Ed.), *Cooperative learning: Theory and research* (pp. 173-202). New York: Praeger.

Slavin, R. E. (1996). Research on cooperative learning and achievement: What we know, what we need to know. *Contemporary Educational Psychology, 21,* 43-69.

Sorrentino, R. M. (1996). The role of conscious thought in a theory of motivation and cognition: The uncertainty orientation paradigm. In P. M. Gollwitzer & J. A. Bargh (Eds.), *The psychology of action: Linking cognition and motivation to behaviour* (pp. 619-644). New York: Guilford Press.

Weiner, B. (1984). Principles for a theory of student motivation and their application within an attributional framework. In R.

Ames & C. Ames (Eds.), *Research on motivation in education: Student motivation* (Vol. 1, pp. 15-38). San Diego, CA: Academic Press.

Weiner, B. (1992). *Human motivation: Metaphors, theories, and research.* Nebury Park, CA: Sage.

Williams, M., & Burden, R. (1997). *Psychology for language teachers.* Cambridge: Cambridge University Press.

Winne, P. H. (1995). Inherent details in self-regulated learning. *Educational Psychologist, 30,* 173-187.

Wong, M. M., & Csikszentmihalyi, M. (1991). Motivation and academic achievement: The effects of personality traits and the quality of experience. *Journal of Personality, 59,* 539-574.

Notes