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WORKING PAPER

Managerial learning from on-the-job experiences: An integrative framework to guide future research

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ABSTRACT

Both scholars and practitioners increasingly attest to the importance of developmental on-the-job (OTJ) experiences as the primary source of managerial learning. However, there is no single theory of managerial OTJ learning; several elements are missing in the conceptualization of the developmental OTJ experience construct, no comprehensive nomological network of the construct has been developed so far, and the underlying mechanisms explaining the relationship with relevant learning outcomes have not been examined in depth. In response to these shortcomings, current paper proposes an integrative framework of managerial learning from developmental OTJ experiences. First, we suggest developing a better understanding of the developmental OTJ experience construct by considering it from a scope beyond the managers' job assignments, by also including more quantitative measures of OTJ experience and by looking further than the current job. Next, the central variable of interest is linked to individual and situational variables that influence directly the extent to which managers are confronted with developmental OTJ experiences as well as involve conditions that enhance or inhibit managerial learning (i.e. moderating mechanisms). Finally, our model emphasizes the importance to take into account relevant mediating mechanisms in order to fully understand the impact of OTJ experiences on managerial learning. Building on our model, we conclude with a discussion of promising avenues for future research.

INTRODUCTION

McCall (2004: 130) stated that: "to really make effective use of experience to develop (managerial)[3] talent, we need a much better understanding of the learning process as it plays out on line and of how to help people make the most of experiences they have." Current paper addresses this call for more systematic research on managerial learning from OTJ experiences and offers a theoretical framework to advance and guide future research.

As a result of the ever-increasing rate of technological change, induced by developments such as globalization and the current "explosion of knowledge", employees' learning capabilities are pinpointed as the key strategic factors for organizations. Especially the value of managerial learning is underscored by the interest in high-performing and learning organizations. For, the new trends at societal level result in an increased recognition of the need for management talent (Howard, 2001) and employees at managerial level are considered to act as catalysts for organizational change and development (Dechant, 1990). Not surprisingly, organizations have become more concerned with how to provide critical support to enhance managerial learning.

Historically most research on managerial learning has focused on formal training (McCauley & Brutus, 1998; Wexley & Baldwin, 1986) which is typically institutionally-sponsored, classroom-based and highly structured (Marsick & Watkins, 1997). More recent research in the area of management development, however, increasingly attests to the importance of OTJ experiences as the primary source for learning and development (Cunningham & Iles, 2002; McCauley & Brutus, 1998). Several qualitative studies have shown that most development of employees at

[3] Added by the authors.

managerial level may occur on the job itself (Davies & Easterby-Smith, 1984; Ellinger & Bostrom, 2002; Hunt, 1991; McCall, Lombardo & Morrison, 1988; Mumford, 1997; Wick, 1989). Moreover, these studies have suggested that the most critical competencies for today's managers, such as handling multiple lateral relationships and meeting changing demands (Howard, 2001), are gleaned from those OTJ experiences.

Unfortunately, research on managerial learning from OTJ experiences has proceeded without any clear theoretical framework (McCall, 2004; Noe, Wilk, Mullen, & Wanek, 1997). To date, research focused primarily on the identification and measurement of those OTJ experiences that stimulate managerial learning (McCall et al., 1988; McCauley, Lombardo, & Usher, 1989; McCauley, Ruderman, Ohlott, & Morrow, 1994). A further elaboration on the OTJ experience construct and the development and test of a broader nomological net of the central variable of interest is needed. Some preliminary and other more general models explaining the role of experience in enhancing relevant outcomes have been proposed before (Morrison & Brantner, 1992; Morrison & Hock, 1986; Tesluk & Jacobs, 1998). Morrison & Brantner (1992), for instance, developed a model of factors that influence learning a new position. Characteristics of OTJ experiences form one of the four categories of variables included in their model, next to individual differences, context and environment. Although the model gives a comprehensive overview of job characteristics and other variables having an impact on learning outcomes, it only considers the direct relationship between each of the four categories of variables and learning, and does not account for the interplay between the variables. Tesluk & Jacobs (1998) assign a more central position to experience and propose how, in interaction with individual and situational variables, work experiences may evolve and result in relevant outcomes. Our theoretical framework built upon several ideas made explicit by Tesluk & Jacobs (1998) (cf.

infra). However, as their model concerns work experience in general and its role with regard to all domains of HR (i.e. performance, retention, development, etc.), a translation towards the managerial OTJ learning context was needed.

Our major purpose was to develop a theoretical model of managerial learning from OTJ experiences in the work context. The paper's framework is as follows. We first point out and define our specific area of interest, namely managers' learning that takes place through their OTJ experiences in the work context. This is followed by the discussion of our theoretical model in which the developmental OTJ experience construct is described in detail and studied in its broader nomological network. We discuss the situational and individual antecedents that explain individual differences in developmental OTJ experiences, the mechanisms underlying the relationship between those OTJ experiences and learning outcomes, and the situational and individual factors moderating the extent to which managers learn from their OTJ experiences. Starting from our model, we finally formulate suggestions for future research.

Defining and Delineating Managerial Learning from OTJ Experiences in the Work Context

We delineated our research area of interest to (1) learning in the work context; (2) that takes place OTJ, and; (3) by managers. These three restrictions are further discussed below.

Learning in the work context. Following McCauley & Hezlett (2001), we define learning in the work context as the process whereby people expand their capacity to function effectively in their current or future job and work organization. Thus, in conceptualizing learning we take both the process and the resulting outcomes into account. As such we integrate two traditions of how

learning has been presented in the literature; some authors define learning in terms of outcomes; others focus on the processes to define learning (Edmondson, 1999).

Learning from OTJ experiences. Obviously, learning processes and outcomes may appear in various ways. We are more specifically interested in learning from OTJ experiences, or Marsick and colleagues (1990; 1997; 1999) have called "informal learning". Following Gherardi, Nicolini & Odella, (1998) and McCauley et al. (1994), we define learning from OTJ experiences as learning that takes place through participation in some actual practices in the workplace. Two defining features can be distinguished. First, interactions with the environment, such as task accomplishments and interpersonal interaction are seen as the major sources of learning (Marsick & Watkins, 1990). Second, this learning can take place in and be deliberately encouraged by an organization, but it is not highly structured or planned and control of learning rests primarily in the hands of the learner (Marsick & Watkins, 1990)

Managerial learning. As discussed in the above, we finally delineate our model to managerial learning from OTJ experiences. This will have implications for both the type of OTJ experiences and the learning outcomes to be included, being only those characteristic of and relevant to the context of managerial jobs. Although one can argue that this is a limited scope of learning from OTJ experiences, we hereby follow Quiñones, Ford, & Teachout's (1995) suggestion that experience must be examined in its specific context. As experiences and the critical features that determine outcomes will differ from one context to another (e.g., managers learn from different types of OTJ experiences than white color workers), it is important to take into account the specific context of interest.

A MODEL OF MANAGERIAL LEARNING FROM OTJ EXPERIENCES

Although there is no single theory of "learning from OTJ experiences" (Cheetham & Chivers, 2001), McCauley & Hezlett (2001) identified a wide range of general theories relevant for explaining learning and development in the work context, which they then organized into three broad lenses: behavioral change, self-directed learning and adult development. The behavioral change lens (e.g. behavioral learning theory, expectancy theory) focuses on replacing currently ineffective behaviors with more effective ones and highlights the role of goals, instrumentality beliefs and reinforcement in the change process. Through the self-directed learning lens (e.g. research on antecedents of participation in development, learning to learn), learning is viewed as an activity that is actively and deliberately pursued by individuals. This lens provides a rich description of both individual and situational characteristics that encourage self-directed attempts to learn. The adult development lens (e.g. cognitive constructivism, experiential learning model) points to experience as the medium through which learning occurs and draws attention to how people learn.

With respect to this distinction among the three lenses, McCauley & Hezlett (2001) argued that future research on learning and development in the work context should integrate across the different lenses, as each of the lenses provides a great deal of insight into the conditions that foster individual learning and the situation that may derail it. The adult development lens and the self-directed learning lens are most closely related to our definition of learning from OTJ experiences (see two defining features above), but also the behavioral lens provides a valuable foundation to build our model on. In line with the adult development lens, our model considers OTJ experiences the major source from which managerial learning takes place. Further, the adult

development lens offers us insights in the learning process that takes place (see discussion on mediating mechanisms). From a self-directed learning lens our model recognizes that, in comparison with formal training, learning from OTJ experiences places other demands upon the individual (i.e. being responsible for own learning) and upon the support from the environment (see discussion on individual and situational antecedents and moderating mechanisms). Finally, our model recognizes that motivational mechanisms in individual and stimuli in the environment are critical (see also discussion on antecedents and moderators), and as such integrates the behavioral change.

Our model of managerial learning from OTJ experiences is represented in Figure 1. In the following, we first address the conceptualization of the developmental OTJ experience construct. Next, we explore the influence of situational and individual antecedents on the appearance of developmental OTJ experiences. This is followed by a closer look at the relationship between developmental OTJ experiences and learning outcomes. Hereby, we consider both mediating mechanisms and moderating conditions that may further our understanding of the relationship.

Insert Figure 1 about here

Conceptualizing Developmental OTJ Experience

As stated before, our model focuses on OTJ experiences within the context of managerial jobs. Over the last two decades, the field of management development has made notable attempts to identify OTJ experiences that stimulate managers' learning (Bray & Howard, 1983; Kelleher,

Finestone & Lowy, 1986; McCall et al., 1988; Morrison & Brantner, 1992). Building on this previous, primarily qualitative, work McCauley and colleagues (1994) developed and validated a comprehensive conceptualization and operationalization of the developmental OTJ experience construct. Below, we first briefly describe McCauley et al's (1994) conceptualization. Although we recognize that their work has been an important impetus to stimulate more systematic research, we argue at the same time that a more complete consideration of the OTJ experience construct is needed. More specifically, in what follows we elaborate on three aspects that are according to us missing in the current conceptualization of developmental OTJ experience: (1) There is only a limited domain of OTJ experiences included; (2) McCauley et al.'s conceptualization does not account for experience in quantitative terms (i.e. length and amount of OTJ experience), and; (3) No career perspective is taken into account.

McCauley et al.'s (1994) conceptualization of developmental OTJ experience. McCauley and colleagues define developmental OTJ experiences as: experiences occurring in the course of dealing with roles, responsibilities and tasks associated with one's job that stimulate learning (McCauley et al., 1994). More specifically, they conceive the developmental OTJ experience construct as being an aggregated multidimensional construct consisting of six broadly defined dimensions: unfamiliar responsibilities, creating change, high levels of responsibility, managing interfaces, dealing with diversity, and obstacles (McCauley, et al. 1994; Ohlott, McCauley & Ruderman, 1995; Ruderman, Ohlott & McCauley, 1990). Unfamiliar Responsibilities refer to the degree to which managers' current job assignments require them to handle responsibilities that are new, very different, or much broader than previous ones. Creating Change is defined as the extent to which current job assignments provide responsibilities for implementing change, and includes three different types of responsibilities: developing new directions, inherited problems

and problems with employees. A third developmental job component is High Level of Responsibility, standing for the degree to which the current job assignments provide visibility with senior executives, require extensive responsibility on behalf of the job-holder, and provide opportunity to have a significant impact on work operations. The dimension Managing Interfaces incorporates the extent to which current job assignments require to manage relationships with people inside and outside the organization. Managing Diversity or the degree to which current job assignments require working with individuals and organizations from other cultures or managing a diverse work group is another developmental component of the job. The last dimension has to do with the context of the job; in particular, the Obstacles faced on the job, including adverse business conditions, lack of top management support and difficult boss.

The multidimensional character has been confirmed in later studies (Tesluk, Dragoni & Russell, under review[4]). Also, the developmental OTJ experience construct has been proven useful in predicting learning outcomes (McCauley, et al., 1994; Tesluk, et al., under review). Nevertheless, we argue that with regard to the content validity of the developmental OTJ experience construct, a broader conceptualization would contribute to both practice and research in the management development domain. McCauley et al. (1994) delineated the developmental OTJ experiences to those experiences that managers are faced with in the current job assignment. In the following we suggest three ways to come to a more comprehensive understanding of developmental OTJ experience.

[4] This study did not include the Obstacles dimension. With regard to the remaining five dimensions, the results show that the dimensions form an aggregated multidimensional construct, or an overall representation of the extent to which a managerial job can be characterized as developmental (Law, Wong & Mobley, 1998).

Managerial OTJ experiences that stimulate learning, more than job assignments. Although the developmental job assignments are probably most central to the process of OTJ learning, also other types of OTJ experiences (i.e. actual practices in the workplace) could stimulate managers' learning (McCauley, 2001; McCauley, Moxley & Van Velsor, 1998). For instance, experiences can occur on the job through relationships with others (McCauley & Douglas, 1998) or through hardships in the workplace (Moxley, 1998). If we want to come to a more solid understanding of managerial learning from OTJ experiences a broader domain of OTJ experiences should be taken into account.

Both the management development and the career development literature point to the importance of relationships in stimulating individual's learning (e.g. Levinson, Darrow, Klein, Levinson & McKee, 1978; Hall, 1986; McCall et al., 1988). In the management development literature, McCauley & Young (1993) refer to these relationships as developmental relationships, and define them as relationships that impact on the motivation and opportunity for learning. The authors distinguish among several roles that could fulfill the motivation function (feedback provider, role model, account) or the opportunity function (expert, dialogue partner, practice partner, etc.). Although career theorists discuss and examine relationships primarily in respect to career development outcomes (e.g., career success and job satisfaction), they also increasingly stress mentoring and other developmental relationships as one of the tools to enhance individual learning (Cheetham & Chivers, 2001; Hall, 1996; Kram & Cherniss, 2001; Lankau & Scandura, 2002). Following Kram's (1985) seminal work, most scholars in the field make a distinction between career functions and psycho-social functions, which are considered to be the essential characteristics that differentiate developmental relationships from other work relationships.

Next to relationships with significant others, hardships are pinpointed as developmental experiences (Moxley, 1998). Examples are business mistakes and failures or career setbacks. Based on qualitative research Moxley (1998) maintains that at the core of any hardship there is a sense of loss which causes people to stop and reflect, and as such drives change and learning.

Managerial OTJ experiences that stimulate learning, more than the qualitative component. McCauley et al.'s (1994) conceptualization does not provide an adequate consideration of what Tesluk & Jacobs (1998) have called the quantitative aspect of OTJ experience. The authors distinguished between the qualitative and quantitative component of OTJ experience. The qualitative component reflects the specific nature of an experience. It corresponds, in other words, to the type of experiences that managers are confronted with as described by McCauley and colleagues (1994). In contrast, the quantitative dimension includes time-based and amount-based measures (Quiñones et al., 1995; Tesluk & Jacobs, 1998). Time-based measures concern the time working on a task, in a job or in an organization and are operationalized in various measures of tenure. The learning curve found in a number of early laboratory studies (Mussen & Rosenzweig, 1977; Taylor & Smith, 1956) pictures the importance to include time-based measures. The learning curve entails that, regardless the task or job, a certain amount of time is required to learn the knowledge and skills to function effectively in that task or job. However, after a certain length of time, individuals master the required knowledge and skills, which results in a plateau-shaped learning effect. Amount-based measures refer to the number of times that someone has performed a certain task or duty, and thus had the opportunity to that job or task. Several studies identified these opportunities as an important factor to learn about the task or job (Ford, Quiñones, Sego, & Speer-Sorra, 1992; Ford, Smith, Weissbein, Gully, & Salas, 1998; Quiñones et al., 1995).

Managerial OTJ experiences that stimulate learning, more than the current job. McCauley et al.'s (1994) conceptualization of developmental OTJ experiences only accounts for the OTJ experiences in the current job. Several scholars (e.g., McCall, et al., 1988; Tesluk & Jacobs, 1998; Van Katwyk, 1996) maintain that when we seek to gain insight into how OTJ experiences impact on learning and development, experiences should be considered from a career perspective. Experiences in the early career likely have a significant impact on learning in later career stages (Berlew & Hall, 1966; McCall, et al., 1988; Morrison & Hock, 1986). Also, experiences may influence individuals differently depending on when they occur throughout their career (Tesluk & Jacobs, 1998). Tesluk & Jacobs (1998) refer to this career perspective as the interaction component of OTJ experience, representing particular combinations of the quantitative and qualitative components as discussed before. Despite this theoretical discussion, only few empirical studies have examined OTJ experiences throughout one's career (Van Katwyk, 1996; Tesluk, Van Katwyk & Dragoni, 2004). Van Katwyk (1996) developed the Leadership Experience Inventory (LEI), an instrument to assess OTJ experiences gained throughout the whole career. In this instrument, respondents are asked to indicate with regard to a wide range of developmental OTJ experiences how many times and how long they faced those OTJ experiences. Tesluk et al. (2004) did a preliminary test of LEI's predictive validity and found support for a career perspective on developmental OTJ experiences in predicting managerial competencies and more distal career outcomes (e.g., advancement potential and performance).

Developmental OTJ Experience in its Nomological Network

Our model draws from two main research approaches to explain differences in learning: the person-centered versus the situation-centered approach (Bandura, 2001; Van der Sluis & Poel,

2002). The person-centered approach stresses the importance of personal factors in affecting learning, whereas the situation-centered approach emphasizes the influence of the situational context. More recently, theorists subscribe to some form of interaction model of causality that portrays learning as a product of personal and situational influences (for a review see Gherardi et al., 1998; McCauley & Hezlett, 2001; Richter, 1998). In response to researchers who have stressed the need for integrating both individual and situational characteristics (e.g. McCauley, et al., 1994; Seibert, 1996; Spreitzer, McCall & Mahoney, 1997; Van Maanen, 1977a, 1977b, 1977c), our model attempts to provide more insight into some interaction model of managerial OTJ learning.

Those situational and individual variables come into play at several points in the learning process. Tesluk & Jacobs (1998) argued that situation and individual directly influence work experience as well as determine the translation of those experiences into outcome variables of interest. Following those authors, our model describes individual and situational variables as antecedents of developmental OTJ experiences and as moderating conditions facilitating or inhibiting the OTJ learning process. Further, it is important to note that, as will become clear from the discussion below, learning from OTJ experiences places, in comparison with formal training, other demands upon the support from the environment (i.e. not highly structured, see definition of Marsick & Watkins, 1990) and upon the individual's role in learning (i.e. control primarily in hands of learner).

In what follows, the developmental OTJ experience construct is first linked to situational and individual variables that contribute to the central variable of interest. Next, we discuss managerial OTJ experience in relation to relevant learning outcomes and, as such, aim to open the "black"

box of the learning process (i.e. mediating mechanisms). Finally, we discuss the situational and individual variables that moderate the developmental OTJ experience – learning relationship.

Antecedents of developmental OTJ experiences. With regard to the situational antecedents that influence our central variable of interest, different levels can be distinguished (society, industry, organization and immediate environment) (Tesluk & Jacobs, 1998; Tjepkema, 2003), but organizational factors and variables at the level of the immediate work environment likely have the most direct impact on the extent to which managers are confronted with OTJ experiences (Rousseau, 1985). Scholars from different fields (Baert, De Witte & Sterck, 2000; Cunningham & Iles, 2002; Noe, et al., 1997; Tjepkema, 2003) maintain that providing OTJ experiences makes the supportive infrastructure radically different.

At the organizational level, several frameworks describe what this supportive infrastructure may entail. First, Baert et al. (2000), McCauley (2001) and Tjepkema (2003) pointed at the need for an organizational culture and management style that reinforces the importance of learning, as OTJ learning ideally takes place anytime and anywhere. Further, it has been argued that the organization's human resource development function needs to become an integrated business function with the focus shifting from organizing 'training' (formal classroom activities) to providing conditions for 'learning' (covering a wide range of learning opportunities, on-the-job, off-the-job, formal and informal) (Marsick & Watkins, 1993; McCauley, 2001; Van der Krogt, 1995). Also more general human resource management practices, such as job rotation and other career management practices are argued to have a positive influence on the richness of OTJ experiences (McCauley, 2001; Tesluk & Jacobs, 1998). Empirical research demonstrated that the learning culture indeed influences the incidence of developmental experiences (Clarke, 2004;

Davies & Easterby-Smith, 1984). Further, a study from Noe & Wilk (1993) showed that the time, budget and equipment provided for personal development have an impact on pursuing OTJ experiences to learn and develop.

Also with regard to the level of the immediate work environment, learning from OTJ experiences asks for a different supportive infrastructure. In comparison with formal training, where the support function is characterized by a dominant role of training professionals in analyzing training needs, formulating training plans and designing and delivering training, learning from OTJ experiences requires a more active involvement of line managers, peers and significant others in supporting learning in the work context (Tjepkema, 2003). Support from others are suggested to be important in providing and pursuing developmental OTJ experiences, as people themselves often do not frame developmental OTJ experiences as learning opportunities (McCauley & Hezlett, 2001). Tharenou (1997) found empirical evidence that encouragement from supervisor and peers is the most important factor for seeking opportunities for development. Further, a study of Maurer, Weiss & Barbeite (2003) showed that social support for development at work and outside work has a positive influence on people's participation in development activities.

With regard to the individual antecedents that influence developmental OTJ experience, relevant theoretical and empirical work can be found within four streams of literature (Brutus & McCauley, 1998). A first stream of research focuses on individual differences in the approach to learn, e.g. learning strategies (Biggs, 1988; Entwistle, 1988; Hoeksema, 1995; Marton & Säljö, 1976; Megginson, 1996; Pask, 1988; Sadler-Smith, 2001; Spreitzer et al., 1997). With it origins in the field of education, this stream of research has been introduced in the adult development

field by Kolb's (1984) work. Second, researchers in the field of management development have examined personality and motivational characteristics of individuals who are particularly adept at learning from job experiences (Bunker & Webb, 1992; Kelleher et al., 1986; Kotter 1995; Spreitzer et al., 1997; Van Velsor & Guthrie, 1998). Third, some scholars have had an interest in the processes by which individuals become more effective self-directed learners, i.e. learning to learn (Brookfield, 1995; Candy, 1990; Gibbons, 1990; Knowles, 1970; Smith, 1990). Finally, the impact of socio-demographic variables (e.g. gender, age and race), occupational descriptors (e.g. occupational class and level in hierarchy) and cognitive ability have been examined.

Last stream of research considers individual difference variables to be factors that influence the extent to which someone has access to developmental OTJ experiences. McCauley & Brutus (1998) argued based on a comprehensive literature review that gender, age and race have an impact on the OTJ experiences received. Findings show, for instance, that women (e.g. Lyness & Thompson, 1997; Ohlott & Eastman, 1994; Van Velsor & Hughes, 1990), and older employees (Campion, Cheraskin & Stevens, 1994; Cleveland & Shore, 1992; Tharenou, 1997) do not have equal access to all types of developmental experiences. Further, Campion et al. (1994) and McCauley et al. (1994) found differences in OTJ experiences across the different hierarchical levels and occupational classes. Finally, there has been found empirical evidence that cognitive ability may influence individual's own perceptions of their development needs and/or capabilities to develop, which in turn determine the participation in developmental activities (Maurer et al., 2004; Noe et al., 1997). In contrast to this first stream of research, the three other literature streams highlight the individual variables that determine whether and to what extent individuals pursue, instead of have access to, OTJ experiences. The streams have in common that individuals are considered to play an active role in their learning process, and thus also in defining or

pursuing their own learning opportunities (here, OTJ experiences). This is in line with the new role of the learner as included in our definition of learning from OTJ experiences (Marsick & Watkins, 1990).

First, within the educational and adult development field there have been several attempts to make sense of the diversity in how people approach learning. Sometimes in terms of more or less stable personality characteristics (e.g. cognitive style) and sometimes in terms of more or less malleable preferences influenced by contextual factors (e.g. learning strategy) (for a review see Hayes & Allison, 1996; Reynolds, 1997; Sadler-Smith, 2001). Kuhnert & Russell (1990) have argued that one reason why people vary in their learning opportunities at work is that individuals differ in their learning strategy. More specifically, Hoeksema (1995) suggested that developmental OTJ experiences are more likely to result from deep learning strategy (i.e. directed at the meaning of a task) than surface learning strategy (i.e. preference for clear assignments and a serial way of processing information). Research has indicated that an individual's preference for certain approaches to learning (i.e. feeling, action, thinking or accessing others) may narrow his or her learning potential (Dalton, 1998). Also a study of Van der Sluis & Poel (2002) found that individuals with a deep learning strategy and planned learning strategy (i.e. careful deliberation prior to action) report more OTJ experiences that stimulate learning.

Second, the management development field highlights a range of motivational and personality factors that are posited to directly influence developmental OTJ experiences (McCauley, 2001; Spreitzer, et al., 1997; Van Velsor & Guthrie, 1998). Some authors argue learning goal orientation, as conceptualized by Dweck (1986), to be critical in pursuing OTJ experiences (e.g. Bunker & Webb, 1992; McCall, 1994). The reasoning behind is that individuals with a strong

learning goal orientation accept responsibility for learning and seek experiences that will enhance their personal development (VandeWalle, 1997; Brett & VandeWalle, 1999). Others underscore the importance of having a strong self-concept and confidence in one's own abilities (i.e., self-efficacy) (Van Velsor & Guthrie, 1998). Self-efficacy beliefs influence the choices people make. People tend to select tasks and activities in which they feel competent and confident and avoid those in which they do not. Unless people believe that their actions will have the desired consequences, they have little incentive to engage in those actions (Bandura, 1986). Some interesting studies have shown that individuals with high levels of self-efficacy are more likely to choose to participate in all kinds of developmental activities than individuals with low levels of self-efficacy (Maurer et al., 2003; Noe & Wilk, 1993). Others attest to the role of having a sense of personal control (McCauley, 2001), that is a person's view as being responsible for and able to affect outcomes (Ilgen & Klein, 1988; Rotter, 1966). Managers with an internal locus of control are more likely to be motivated to pursue developmental OTJ experiences because they see themselves as in control of their own development and are likely to believe that their efforts will bring improvement (Van Velsor & Guthrie, 1998).

Finally, research on learning to learn recognizes most explicitly that the individual is responsible for his or her learning. Consequently, this domain emphasizes the importance of skills, differently referred to as learning how to learn skills, meta-cognitive abilities or self-direction (Candy, 1990), that enable individuals to monitor, reflect on and evaluate one's learning processes and progress on learning tasks (Smith, 1990). One set of skills that is considered critical in learning rests on increased self-awareness, about for instance personal goals, preferred learning strategies and own skills, and self-control. A basic assumption is that self-awareness and self-control open up more possibilities for learning, or in other words, positively influence the extent to which

individuals pursue OTJ experiences. Although there is no difference with the other literature streams in terms of the variables discussed (e.g. learning strategy and learning goal orientation), the literature on learning to learn provides an interesting contribution by integrating the two previous streams and taking the variables of interest to a higher, meta-cognitive level.

Above and beyond the direct effects of situational and individual antecedents, we expect the antecedents to interact with each other, and as such influence developmental OTJ experiences. We thus consider actual behavior (here, pursuing developmental OTJ experiences) to be function of a continuous process of interaction or feedback between the individual and situational opportunities and constraints. Interaction effects between individual and situation have been conceived of in two directions. Some authors emphasize that the psychological meaning of situational variables for the individual is the important determining factor of actual behavior (Magnusson & Endler, 1977; Sarason, 1977). In other words, individual variables are considered to moderate the relationship between situational antecedents and the extent to which individuals actually pursue developmental OTJ experiences. Morrison & Hock (1986) for instance maintain that individual differences in career preferences determine to what extent people pursue OTJ experiences offered in the work context. Other authors focus on the moderating effect of situational variables in the relationship between individual antecedents and OTJ experiences. Mischel (1977), for instance, stated that the strength of the situation, or the amount of freedom to behave differently in a specific situation, determines the extent to which individual differences influence actual behavior. The author makes a further distinction between strong and weak situations saying that strong situations, that are situations in which everyone expects that only one response is appropriate, will force people to behave in a certain way. Contrary, weak or ambiguously structured situations provide individuals with the freedom to behave according to

their individual differences. Tesluk et al. (under review) found empirical evidence for the moderating effect of situational variables in the relationship between individual antecedents and developmental OTJ experiences. More specifically, the findings show that the relationship between individual learning goal orientation and pursuing developmental OTJ experiences is moderated by the degree to which the person has access to developmental assignments (i.e. strength of the situation). When individuals have access to developmental assignments (i.e. weak situation) the individual's learning orientation predicts developmental OTJ experiences. If however, individuals do not have access to developmental assignments (i.e. strong situation) there is no positive relation between learning goal orientation and developmental OTJ experiences.

The developmental OTJ experience – outcomes relationship and its mediating mechanisms clarifying the OTJ learning process. Within the management development literature it is generally accepted that developmental OTJ experiences are a central key in determining managerial learning outcomes (McCauley, 2001). Based on an extensive set of interviews with successful managers, McCall & colleagues (1988) identified 33 lessons gleaned from OTJ experiences that they grouped into 5 themes: (1) setting and implementing agendas; (2) handling relationships; (3) basic values; (4) executive temperament; and (5) personal insight. The authors argue that these themes represent fundamental managerial skills and ways of thinking that enable managers to function effectively in organizations. Indeed, the identified themes map largely upon the managerial competencies indicated to be critical for managerial success (Spreitzer et al., 1997), that are business knowledge, working with people, commitment and persistence and effort. Other authors argue further that the lessons learned from developmental OTJ experiences are not innate qualities, such as intelligence, or propositional knowledge for a specific job (i.e.

knowing what) but rather a wide range of procedural knowledge (i.e. practical knowledge, knowing how), skills and values that have been found to predict managerial success in the current job and executive potential. McCauley et al. (1994), for instance, argue that with their emphasis on insights and perspectives, the lessons learned differ from a more traditional model emphasizing job-specific behaviors and competencies. In a similar vein, Noe et al. (1997) stated that OTJ experiences are likely less focused on skills or behaviors tied to a certain position, but instead on insights and perspectives that are necessary for long-term effectiveness. Two studies (McCauley et al., 1994; Tesluk et al., forthcoming) have found empirical evidence supporting the relationship between developmental OTJ experiences and learning outcomes. However, for some OTJ experiences (e.g. obstacles in the job), the earlier qualitative findings that these experiences are positively related to learning (McCall et al., 1988) have not been confirmed by later empirical work (McCauley et al. 1994; Van der Sluis & Hoeksema, 2001).

As to date, only limited empirical research went beyond the direct relationship between developmental OTJ experiences and learning to look into the underlying mechanisms (Seibert & Daudelin, 1999). Further, the above mentioned equivocal findings raise doubt by the idea that the OTJ experiences identified by successful executives (e.g. McCall et al., 1988) are sufficient to explain differences in managers' learning. Facing those OTJ experiences does not always seem to promote managerial learning. To address these shortcomings in the current state of research, we propose to open the black box of the learning process by examining the mediating mechanisms that explain the impact of developmental OTJ experiences on learning outcomes.

Two streams of literature may help to clarify the mediating mechanisms; some scholars emphasize the cognitive aspects of the learning process, whereas others' main research interest

lies in the motivational aspects of the learning process (Ellis, Mendel & Nir, 2006). The cognitive aspect has to do with the internal cognitive examination individuals engage in to make sense of an experience, whereas motivational aspects concern the direction, intensity and duration of these learning processes. As to date, the cognitive aspects, often referred to as reflection, have received most attention in explaining learning outcomes. Especially, within the adult development literature you can find several theoretical models emphasizing the central role of reflection in learning from experience. Authors like Kolb (1984), Schön (1990), Mezirow (1991), all point out that learning will only takes place to the extent that an individual's encounter with a specific event results in active engagement in reflection, which in turn ensures learning. This reflection may take place both actively and proactively (Seibert & Daudelin, 1999). Former implies a continuous process of inquiry and interpretation during an experience aiming to increase someone's understanding of the experience. When reflecting proactively, the individual steps back from the experience and retrospectively draws lessons from the experience. Seibert & Daudelin (1999) were the first to empirically test the cognitive aspect of the learning process. Their research revealed that challenging developmental experiences provide the opportunity for active reflection and that learning only results after and through the extent that managers reflect on the experience.

In contrast to the adult development theory, scholars in the field of management development emphasized that in clarifying how OTJ experiences translate into learning, answers may be found in the motivating effects of challenge and its associated emotions (Bunker & Webb, 1992; Hall, 1991; McCauley et al., 1994; Noe et al., 1997). Across the different studies that looked at the defining characteristics of developmental OTJ experiences, the degree of challenge offered to managers emerged as a common feature (Robinson & Wick, 1992). Accordingly, the major

assumption in the field is that OTJ experiences create challenge for the job incumbent, and that a challenged incumbent will learn and develop in response to the challenge provided (McCall et al., 1988; McCauley et al., 1998; McCauley, 2001).

Looking for further support of this assumption, we came across several models of challenge[5]. Bliese and Halverson (1996) brought the different schools of challenge together in their distinction between nomothetic versus individual level models of challenge. Nomothetic models of challenge (e.g. job design theory of Hackman & Oldham, 1976) focus on objective characteristics of the situation and emphasize the consistencies in how groups or individuals appraise and react to these objective characteristics. In contrast, individual level models (e.g. cognitive transactional stress theory of Lazarus and colleagues, 1966; 1991; 1993) emphasize individual differences in the perception of environment stimuli as essential in the development of reactions to the situation. Translated to our research area of interest, a nomothetic model posits that the challenging features of developmental OTJ experiences will directly influence learning, whereas an individual level model suggest that developmental OTJ experiences only elicit learning through challenge as perceived by the individual.

Next to this distinction between nomothetic and individual level models, there is also a discussion going on in the literature with regard to the predicted relationship between challenge and outcome variables of interest. Most commonly, scholars maintain in line with Yerkes-Dodson's (1908) law of arousal and performance that challenge has an increasingly positive impact on outcomes like performance and learning, but only up until some point, after which the

[5] We elaborate more on the different schools of challenge in Chapter 1 of Part II, when developing our theoretical models describing the role of challenge in managerial learning from on-the-job experiences.

impact of challenge becomes negative. Thus, the predicted relationship takes on an inverted U-shape. More recently, other scholars returned to Selye's (1982) work on the distinction between eustress and distress, arguing that some types of challenge are positively related to the outcomes of interest, whereas other types of challenge have a negative impact on these outcomes of interest (e.g. Cavanaugh, Boswell, Roehling & Boudreau, 2000; LePine, Lepine & Jackson, 2004). Again, translated to our domain of interest, the first stream of research would entail that there is an optimal amount of challenge related to the developmental OTJ experiences (objective or perceived) after which learning decreases. The second stream of research implies that a distinction should be made among the types of OTJ experiences to understand their impact on managerial learning; some have a positive challenging impact, whereas others have a negative challenging impact on learning.

Individual and situational moderating conditions stimulating or inhibiting the OTJ learning process. In addition to the mediating mechanisms explaining the process by which OTJ experiences translate into learning outcomes, we integrated in our model moderating conditions under which this learning process takes place. This is in accordance to Seibert (1996) who stated, among others, that learning does not automatically follow from experience; it requires specific individual characteristics as well as an environment that supports learning from OTJ experiences. In contrast to the discussion on individual and situational antecedents, which concerned the direct impact of individual and situation on developmental OTJ experiences, focus is here on how individual and situation determine what the manager makes of these OTJ experiences in terms of learning outcomes.

With regard to the support from the environment, variables at both the organizational level and the level of the immediate work environment have a moderating effect on the relationship between developmental OTJ experiences and learning. Baert et al. (2000) and Tjepkema (2003) posit in their theoretical models that organizational factors, like having a learning culture, decentralized structure, etc., are not only important in providing learning opportunities but also in supporting the individual's learning and regulation activities. If, for instance, the organization has a decentralized structure and open communication system managers will more likely search for feedback with peers and other experts in order to improve their learning process. Tannenbaum (1997) found evidence that a continuous learning environment in the organization (e.g. supportive development policies, openness to new ideas and change, etc.) is significant related to employees' perceived competence and satisfaction with their development. Further, scholars in the field of management development argue that so-called developmental relationships in the immediate work environment may help translate OTJ experiences into learning outcomes (McCauley et al., 1994; Valerio, 1990) and this in several ways. First, support from others might lessen stress that interferes with learning. Without safeguards and support, a new assignment could be overwhelming rather than developmental. Second, self-confidence in one's ability to manage OTJ experiences can be encouraged by providing the time and resources needed to begin mastering the assignment. Third, processes for reflecting on one's experiences in the assignment and getting ongoing feedback are necessary for providing the element of examination of self-experience. Finally, ways to show that learning is valued can be built into assignments through developmental relationships (McCauley & Hezlett, 2001). Kelleher et al. (1986) found indeed that high learners received different quality of support than low or medium learners. More precise, highs were more likely to receive task-oriented support, related closely to their supervisors, had more opportunity for upward communication and received feedback in

discussion with their supervisors. Also Morrison & Brantner's (1992) study found a supportive, cooperative work environment to enhance learning a new job.

With regard to the individual variables, the four literature streams as discussed before may provide us with insights in the individual characteristics that determine whether people learn from their OTJ experiences. The first stream of literature focuses on the specific learning strategies that may be more effective in certain OTJ experiences than in others (McCauley & Brutus, 1998). Kolb (1984), for instance, argued that individuals who use more active experimentation are more likely to learn from turnaround assignment, whereas individuals with a more reflective style are more likely to learn from staff assignments.

The management development literature (e.g. Bunker & Webb, 1992; Van Velsor & Guthrie, 1998) considers individual difference variables relevant for overcoming the stress and inertia when confronted with challenging OTJ experiences, namely self-efficacy, learning goal orientation and locus of control. First, self-efficacy has been found to positively impact on the acquisition of new knowledge and skills through OTJ experiences (Morrison & Brantner, 1992). This may be explained by the fact that self-efficacy beliefs help determine how long people persevere when confronting obstacles, and how resilient they are in the face of adverse situations (Bandura, 1977; 1989; Pajares, 1997; Wood & Bandura, 1989). Second, people with a strong learning orientation are more likely to gain lessons from experiences (Tesluk et al., under review), which can be explained by the tendency to perceive feedback as an opportunity to learn (VandeWalle, Cron & Slocum, 2001) and to demonstrate persistence in mastering new skills and knowledge (Dweck, 1986, Van Velsor & Guthrie, 1998). Finally, it is argued that people with an internal locus of control learn more from developmental OTJ experiences (Van Velsor & Guthrie,

1998). Locus of control might influence what people believe about the relation between effort and mastery, and how they feel about rewards they can expect from a learning effort. Individuals with internal locus of control are likely to remain longer committed to difficult goals because they see themselves as in control of their own development and are likely to believe that their efforts will bring improvement.

The learning to learn literature emphasizes the role of higher-order metacognitive abilities (Smith, 1990). A basic assumption is that one can plan for learning, and when people demonstrate intent, control and deliberation in their learning process, they can learn more (Dechant, 1990). Guglielmino, Gugliemino & Huey (1987) found empirical evidence that self-directed learning readiness (e.g. informed acceptance of responsibility for one's own learning, and ability to use basic skills and problem-solving skills) has a positive impact on performance. Finally, Morrison & Brantner (1992) and Pearson & McCauley (1991) suggested to taking into account demographic characteristics, educational level, occupational class and level in hierarchy as individual difference variables in predicting learning from OTJ experiences.

AN AGENDA FOR FUTURE RESEARCH

In the previous, we integrated existing theoretical and empirical work to come to a comprehensive theoretical framework on managerial learning from OTJ experiences. Scholars from several fields have provided us with interesting insights to further our understanding in and provide critical support for managerial learning. There are, however, several themes that need to be explored further. Below, we discuss respectively the need to conceptualize and assess developmental OTJ experience taking into account all relevant facets; to do more systematic

research on the influence of individual and situational variables on managerial learning from OTJ experiences, and; to open the black box of the learning process itself.

Conceptualization and Measurement of Developmental OTJ Experience

As discussed before, we argue that a broader conceptualization of developmental OTJ experiences would contribute to both practice and research in the management development domain.

First, next to developmental job assignments, other OTJ experiences that stimulate managerial learning should be identified. Caution is, however, needed that the broader domain of OTJ experiences fits our definition of learning from OTJ experiences, that is learning that takes place through participation in some actual practices in the workplace (McCauley et al., 1994). If we want to develop and test a sound theory of managerial learning from OTJ experiences, we need to make sure that the OTJ experiences are bound to the context of managerial jobs (Quiñones et al., 1995), and that they are distinguished from experiences in the work context that do not take place on the job (e.g. attending a seminar or formal training) or experiences outside the work context (e.g. personal trauma). Further, despite a general theoretical discussion on what makes OTJ experiences like relationships or hardships developmental, more research is needed to identify those developmental OTJ experiences in detail. With regard to developmental relationships for instance, research should elaborate on the idea that individuals look to more than a primary individual (Higgins & Kram, 2001; Higgins & Thomas, 2001). Traditionally research on developmental relationships has been narrow, focusing on a single mentoring relationship. In line with the social network theory, however, more recent theoretical research (Higgins & Kram,

2001) focuses on the importance of multiple developmental relationships. In line with previous work on developmental job assignments (e.g., McCall et al., 1988), qualitative interviews with successful managers could provide us with interesting insights in the wider range of managerial OTJ experiences that stimulate learning. These insights might be used to extend the multidimensional OTJ experience construct as conceptualized currently by McCauley and colleagues (1994). Next, building on the Developmental Challenge Profile (McCauley et al., 1994), the new conceptualization could lay the foundation to develop and build validity evidence for scales that measure the additional dimensions of the OTJ experience construct. Having a tool for studying developmental OTJ experience will be crucial to progress future research on managerial learning.

Second, in identifying the different dimensions of the developmental OTJ experience construct, it is important to have a closer look at the defining features of the OTJ experiences. So far, focus has been on the degree of challenge offered to managers (Robinson & Wick, 1992). However, by including other OTJ experiences we expect that other developmental features might come into play and explain managerial learning. Hardships, for instance, are different in some ways; they are not always planned and evoke a strong sense of loss (Moxley, 1998). Also, the functions of developmental relationships include more than stretching the learner. An important feature of this type of developmental OTJ experience is providing support in terms of feedback or sounding board (McCauley & Young, 1993). Compared to challenging job assignments, these features may emerge other learning processes (e.g., rather learning after the event or learning through dialogue), may be differently related to learning outcomes and may require other stimulating conditions for learning. Consequently, it is important to examine and take into account the

common and distinctive developmental features across the different developmental OTJ experiences.

> *Proposition 1. A wide range of OTJ experiences, beyond the current job assignment, will stimulate managerial learning. As the developmental features will differ among the different types of developmental OTJ experiences (challenge versus loss of control versus support) it is important to take them into account when examining the relationship with relevant learning outcomes.*

Next to elaborating on the nature of developmental OTJ experience (i.e., qualitative dimension according to Tesluk & Jacobs, 1998), future research needs to include the qualitative dimension in interaction with more quantitative measures (e.g. job tenure) of developmental OTJ experience when studying managerial learning. The management development literature has conceptualized and operationalized the developmental OTJ experience construct primarily in qualitative terms. To our knowledge, only one study (Tesluk et al., under review) examined how the quality and quantity of developmental OTJ experience interact to determine learning outcomes. More specifically, the study found that the OTJ experience – learning relationship is moderated by managers' tenure in their current position, such that the relationship increases with greater tenure but decline again at the highest levels of tenure. Measuring tenure is only one way to assess developmental OTJ experience. Including other quantitative measures, such as the number of times someone performed the task of interest, might provide us with interesting insights in the key components of developing managerial talent. Further, research should find additional support for the idea that above and beyond the direct effects of both qualitative and quantitative aspects

of developmental OTJ experience, their interaction explains additional variance in managerial learning outcomes.

Proposition 2. Including both qualitative measures of developmental OTJ experience (i.e. types of OTJ experiences) and quantitative measures of developmental OTJ experience (i.e. time in experience, number of times confronted with the experience) will further our understanding in managerial learning from OTJ experiences; The learning effect of a certain type of OTJ experience will depend on the extent to which the manager is familiar with this OTJ experience.

Situational and Individual Influences

The OTJ experiences are probably the most critical component to develop managerial talent. The central variable of interest should, however, be examined in relation to relevant situational and individual determinants to come to a more complete picture. Although both from a theoretical and empirical perspective authors pointed out that the context may enhance or inhibit managerial learning and that not all individuals learn equally well from OTJ experiences (McCauley & Brutus, 1998), systematic empirical research remains scarce. Our framework as described before might give an impetus to test the developmental OTJ experience's nomological net more systematically. Below, we emphasize three themes that deserve special attention: support at team level, meta-cognitive abilities and the interaction effect of individual and situational variables.

First, work organizations make nowadays largely use of team-based structures (e.g. autonomous groups, quality circles) to face increasing levels of market competition and technological

innovation (Cohen & Bailey, 1997; Sundstrom, McIntry, Halfhill, & Richards, 2000). This trend likely increases the number of managers that can or have to rely on their team for support in general, and support for learning in particular (Smith-Jentsch, Salas & Brannick, 2001). An active team in terms of team learning behavior (Edmondson, 1999), for instance, may create more opportunities for managers to reflect on their own OTJ experiences. Further, a strong team learning goal orientation (Bunderson & Sutcliff, 2003) may be expected to enhance the degree to which learning goals are pursued by individual team members (Ames & Archer, 1988), which in turn makes it more likely that the individual manager learns from his/her OTJ experiences (Tesluk et al., forthcoming). An important direction for future research is to examine team support variables that will provide managers with more developmental OTJ experiences and that help to extract lessons from those OTJ experiences.

> *Proposition 3. Situational variables at the team level will be critical to support managerial learning from OTJ experiences. Team support variables (e.g., team learning behavior, team goal orientation) will directly contribute to the development of developmental OTJ experiences as well as moderate the relationship between developmental OTJ experiences and managerial learning outcomes, such that managers working in highly supportive teams will learn more from their OTJ experiences.*

Second, with regard to the individual variables, we discussed before that learning from OTJ experiences confirms the trend that today's managers are becoming more responsible for their own learning. Surprisingly, the manager's new role in managerial learning from OTJ experiences has not been studied before. A promising area for research would be to examine the influence of metacognitive abilities, which refer to the extent to which individuals are able to monitor and

control their own learning (Schmidt & Ford, 2003). Several authors in the training field (e.g., Brown, 2001; Bell & Kozlowski, 2002; Schmidt & Ford, 2003) emphasized that metacognitive abilities are critical to success in high learner-control training environments (e.g. web-based training course): "Metacognition helps learners make more informed decisions regarding what control strategies to utilize to progress in their learning, which should result in increased acquisition of the targeted knowledge and skills." (Schmidt & Ford, 2003: 407). As managerial learning from OTJ experiences can be considered another type of high learner-control environment, the empirical evidence found by scholars in the training field will provide interesting insights. However, the distinction between classroom training and OTJ learning makes that the impact of metacognitive abilities should be studied in the specific context of managerial learning from OTJ experiences.

> *Proposition 4. Metacognitive abilities will be critical in managerial learning from OTJ experiences. These individual variables will play an important role both in the extent to which managers pursue OTJ experiences and in the extent to which managers learn from these OTJ experiences.*

Third, although several researchers have stressed the need for integrating both individual and situational characteristics (e.g. McCauley, et al., 1994; Seibert, 1996; Spreitzer et al., 1997; Tesluk & Jacobs, 1998) little empirical studies have applied an interaction approach. Further insights are needed both in how the situation may moderate the relationship between individual characteristics and the outcomes of interest and, the other way around, in how the relation between situational variables and the outcome variables is a function of specific individual characteristics. Further, Tesluk & Jacobs (1998) argue that an interesting avenue for future

research involves examining the relative contributions of individual and situational variables on pursuing OTJ experiences and learning over time.

> *Proposition 5. Above and beyond the direct effects of situational and individual characteristics, an interaction model will further our understanding in how those effects reinforce or weaken each other in influencing managerial learning from OTJ experiences.*

Opening the Black Box

To open the black box of the learning process we can only build on theoretical models that describe the mediating mechanisms in learning from experience in general, and focus on the more cognitive aspects of the learning process (e.g. Kolb's experiential learning theory, Mezirow's transformation theory and Schön's reflection-in-action theory). Further, little empirical evidence (Seibert & Daudelin, 1999) exists on the mediating mechanisms explaining the impact of developmental OTJ experiences on learning outcomes.

Future research might begin with identifying the broader scope of critical motivating and cognitive mediating mechanism. As highlighted in the preceding we expect that conceiving the developmental OTJ experience construct more broadly will emphasize a wider range of defining characteristics, which in turn implies that other mediating mechanisms might come into play.
More specifically with regard to learning from managerial job assignments, as conceptualized by McCauley et al. (1994), the management development literature consistently posits that the motivating effect of challenge may explain why managers learn from the identified job assignments. However, more theoretical work is needed to understand where and how exactly

challenge comes into play. As discussed before, challenge has been a central variable of interest within several streams of research, resulting in conflicting models of challenge (i.e. objective challenge/nomothetic model versus perceived challenge/individual level model and; level of challenge versus type of challenge predicting the outcomes of interest). Empirical work needs to test and confront the different models with each other as proposed in following hypotheses:

Proposition 6a. (Nomothetic model) The challenging features of developmental OTJ experiences will directly influence managerial learning outcomes.

Proposition 6b. (Individual level model) The relationship between developmental OTJ experiences and learning outcomes will be, at least partially, mediated by challenge as perceived by the manager.

Proposition 6c. (Level of (perceived) challenge) Perceived challenge will be inverted U-shaped related to managerial learning, such that at very low or at very high levels of (perceived) challenge, managerial learning will be lower than at moderate levels of (perceived) challenge.

Proposition 6d. (Type of (perceived) challenge) (Perceived) challenge associated with specific dimensions of developmental OTJ experience will be differentially related to managerial learning.

CONCLUSION

Both practice and research have pinpointed developmental OTJ experiences as key factors in managerial learning and development (McCall, 2004). Notwithstanding, we argued in this chapter that current research has not yet considered the developmental OTJ experience construct

in all its facets and that systematic research on factors that influence learning from developmental OTJ experiences is lacking. With our theoretical model we sought to provide a framework to guide future research in addressing these shortcomings. First, we suggested to broaden the developmental OTJ experience construct, and to go beyond the current job assignment when identifying OTJ experiences that stimulate learning. Second, we suggested to include individual and situational variables in a nomological network of the developmental OTJ experience construct, with special attention for those variables that are in line with the defining characteristics of OTJ learning (e.g. metacognitive abilities) and that are relevant for organizational practice (e.g. support from teams). Third, we suggested looking closer into the underlying mechanisms of the on-the-job learning process in order to better understand what features of the developmental OTJ experiences result in learning.

Although we provided an extensive theoretical framework, it is not without its limitations. First, our definition of OTJ learning took into account both the process and outcomes of learning (cf. section 1.1.1). However, in developing our model we primarily focused on the process aspects, or the variables that clarify and influence the developmental OTJ experience-outcome relationship. In line with our research objective, we only included learning outcomes that have been identified to be specifically obtained through OTJ learning (i.e. business knowledge, behaviors such as working with people and attitudes such as persistence). As extensively discussed in the training literature (e.g. Alliger & Tannenbaum, 1997; Kirkpatrick, 1959), these learning outcomes are only one category of potential outcomes. A learning experience may also be evaluated in terms of participants' reactions (e.g. satisfaction) or more distant outcomes at the organizational level (e.g. performance and employee retention). It would be for instance interesting to examine whether satisfaction with the learning experience is an indirect indication of actual learning (Kirkpatrick,

1959), or whether participation in developmental OTJ experiences increases managers' perceived organizational support, which has been found to positively influence organizational outcomes such as employee retention (Eisenberger, Stinglhamber, Vandenberghe, Sucharski, & Rhoades, 2002).

Related to the lack of more distal outcomes, a second limitation concerns the limited timeframe accounted for in our model. We addressed the dynamic nature of learning from OTJ experiences by including previous experience, yet we did not look into the processes that may take place after the first new knowledge, skills and attitudes are acquired. More specifically, we think of reflective processes that individuals go through some time after the learning experience took place. Lessons may be learned only through this reflection, and only a broader timeframe will shed light on these more distal processes and outcomes.

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FIGURE 1

A Integrative Framework on Managerial Learning from Developmental OTJ Experiences