Crossing Borders with Personnel Selection: From Expatriates to Multicultural Teams

Stefan T. Mol

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From Expatriates to Multicultural Teams

Grenzen verleggen met personeelsselectie

van expatriates naar multiculturele teams

PROEFSCHRIFT

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STELLINGEN

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van Stefan T. Mol

1. Een blindelings vertrouwen op een generalisatie van reguliere prestatietaxonomieën naar de expatriate context zal onherroepelijk leiden tot criteriumdeficiëntie (dit proefschrift).

2. Hoewel het in dit proefschrift niet werd aangetoond, is intelligentie toch een van de beste voorspellers van expatriate werkprestaties (dit proefschrift).

3. In het kader van (expatriate) personeelsbeslissingen is ‘Big’ een woord dat niet evenredig van toepassing is op elk van de ‘Big Five’ persoonlijkheidsdimensies (dit proefschrift).

4. Onderzoek naar selectie van expatriates sec moet onmiddellijk worden gestaakt (dit proefschrift).

5. Het gebruik van scree tests voor factorretentie-beslissingen in exploratieve factor analyses zou moeten worden vervangen door parallelle analysetechnieken (dit proefschrift).

6. Uitgeverijen van wetenschappelijke artikelen annexeren grote hoeveelheden geld van de Nederlandse overheid door haar wetenschappelijke ambtenaren het copyright op hun output en daarmee de royalties te ontnemen, alvorens deze artikelen in wetenschappelijke tijdschriften gebundeld voor veel geld aan universitaire bibliotheken terug te verkopen.

7. Alhoewel de hoeveelheid wetenschappelijke kennis exponentieel toeneemt, neemt de bruikbaarheid ervan exponentieel af.

8. Om te voorkomen dat wetenschappers hun hypotheses pas opstellen op het moment dat deze reeds zijn ondersteund op basis van de verzamelde data zou het review proces in twee fases moeten plaatsvinden.

9. Er zit waarheid in consensus.

10. Als er vanaf morgen nergens in de wereld meer koffie te koop zou zijn, zou de wereldeconomie overmorgen instorten.

11. Ook in de liefde daalt de selectieratio naarmate men kritischer is.

grateful to GITP for financing half of my PhD position, and would particularly like to thank Hans Hoekstra and Rob Daver for the part they played in making this possible.

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Acknowledgments

This dissertation has but my name listed on the front. It has long been known that particularly in the Western world there is a pervasive tendency of people to attribute their successes to their personal disposition and their failures to bad luck or external circumstances. Interestingly, and as described in Chapter 6 of this dissertation this self-serving bias is less common in more collectivistic parts of the world where people define their selves in terms of the relationships they have with others.

In looking back upon the last number of years, I am not all tempted to engage in self-serving contemplations since I am well aware of the fact that a large number of people were vitally instrumental in making this dissertation possible. This work is the result of their help, their encouragement, their love, their support, their time, and their patience.

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As part of the data collection process for the study that is reported in Chapter 6 I was fortunate to be able to travel South Africa. I am greatly indebted to Deon Meiring for all his help in gaining access, not forgetting Deon's family for their warm reception in Pretoria. I also thank the South African Police Services for allowing me access to their already overloaded trainees. Lonneke de Meijer, thanks also for your company and all of your help in data collection. I could have never managed it on my own.

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Contents

Chapter 1

Introduction: Background of the Studies and Research Questions

Personnel selection is one of the main activities of the industrial and organizational psychologist. Yet, little is known about whether principles of personnel selection that have been developed in domestic and mainly Western (i.e., North American and European) contexts will apply in intercultural workplaces, such as those faced by expatriates. The present dissertation presents one theoretical investigation and four empirical studies into personnel selection in the intercultural and 'alter' cultural context, with a particular focus on both the predictors and the criteria that may be successfully employed for the selection of expatriates. In this introductory chapter, Binning and Barrett's (1989) elaborated model for personnel decisions research is used to frame the different chapters in this dissertation. Next, this opening chapter introduces some of the main characteristics of constructs employed in the subsequent chapters. In all, three research questions that will be addressed in Chapters 2-7 are posed. These are: 1) Can performance be adequately and accurately assessed in the cross-cultural industrial and organizational psychological context (i.e. across jobs and cultural contexts), and can it be related to individual differences variables that might be employed for purposes of personnel selection? 2) Can the Five Factor Model (FFM) dimensions be usefully employed as predictors of various outcomes (i.e., job and training performance and expatriation willingness) within the cross-cultural industrial-organizational psychological context? And, 3) Will predictors that match the criterion in specificity and content demonstrate a higher predictive validity than predictors that do not?

Personnel selection is an important pursuit within the field of industrial and organizational psychology, and much has been learnt from intracultural research on this topic (see for example Robertson & Smith, 2001; Salgado, Viswesvaran, & Ones, 2001). Yet, relatively little research has focused on personnel selection within the intercultural context (Aycan & Kanungo, 2001), where cultural differences may impede upon the feasibility of adequate and accurate performance assessment and where individual differences in selection context predictors may be shrouded by cultural differences. The current dissertation therefore embarks on a quest to elucidate and address some of the challenges that may be encountered when personnel psychological principles and applications that typically derive from the North American and European research literatures, are employed to explain or predict work behavior in cultural contexts that differ from those from which they originate. This introductory chapter is aimed at framing the theoretical chapter and the four empirical studies that are reported in Chapters 2-6 and also at introducing some of the main criterion and predictor constructs employed in this dissertation.

Challenges that may be encountered in applying Western personnel psychological principles and applications in other cultures, are not only likely to be encountered when companies send their employees on expatriate assignments, but also when personnel psychological principles and applications are applied within countries that have a differing cultural makeup. An example of the latter is South Africa, a multicultural nation that is only just starting to come to grips with its apartheid legacy. To what extent can principles of personnel selection that derive from the North American and European research traditions be successfully applied within such a multicultural and complex context? The studies included in this dissertation attempt to provide new perspectives on a) the prediction of expatriate job performance (Chapter 2); b) the theoretical basis for the adequate and accurate assessment of expatriate job performance (Chapter 3); c) the prediction of multidimensional expatriate job performance (Chapter 4); d) the prediction of expatriation willingness (Chapter 5); and e) the adequate and accurate assessment and prediction of performance in (collectivistic) cultures that emphasize an interdependent view of the self (see Markus & Kitayama, 1991) (Chapter 6). Thus, although the studies have different foci, they share that they are concerned with the cross-cultural generalization of personnel psychological principles and applications to multicultural and ‘alter’ cultural contexts. Although each of the chapters included in this

dissertation may be read as a 'standalone' article, some of the employed theoretical frameworks and constructs have considerable overlap. Therefore the remainder of this introduction will be limited to the overarching elaborated model of Binning and Barrett (1989) for personnel decisions research, and a brief introduction of the most relied upon guiding constructs that were used as foundations for the studies.

1.1 Personnel selection and cross-cultural industrial and organizational psychological research

As mentioned earlier, all of the studies included in this dissertation are in one way or another related to personnel selection. The field of personnel selection has its

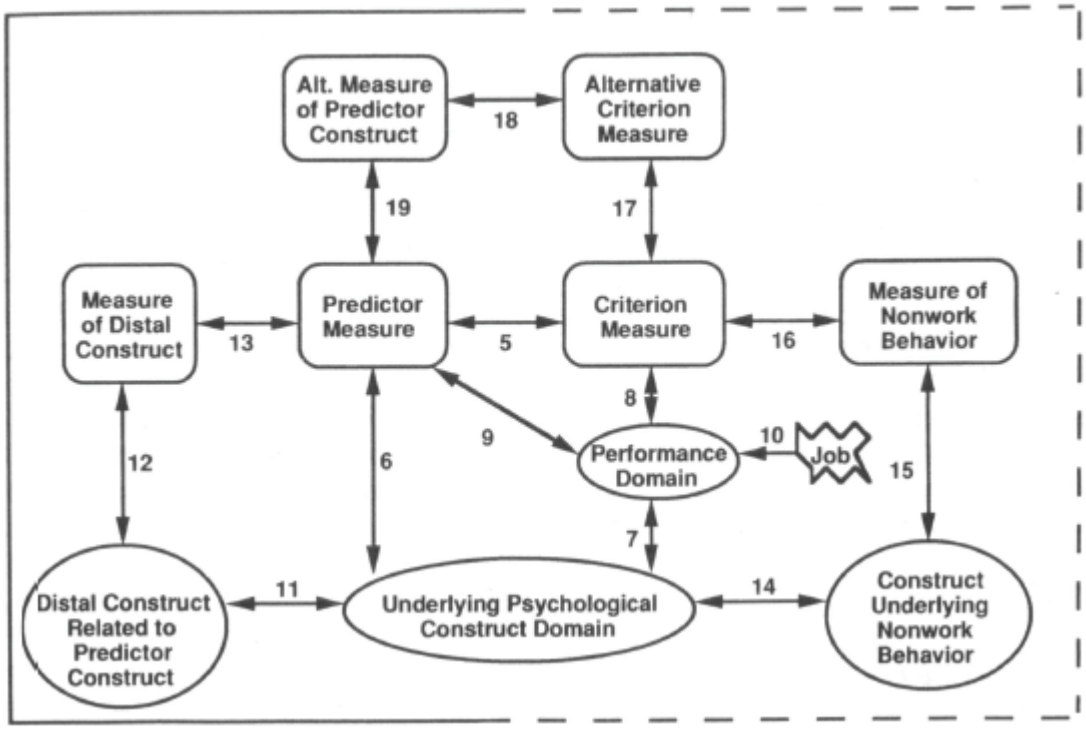


Figure 1: Binning and Barrett's (1989) elaborated model for personnel decision research.

Note. The numbering of the arrows starts with five because Binning and Barrett started numbering in an earlier figure. From Binning, J.F. and Barrett, G.V. (1989). Validity of personnel decisions: A conceptual analysis of the inferential and evidential bases. *Journal of Applied Psychology, 74*(3), 478-494. ©1989 American Psychological Association. Reprinted with permission from the authors and the publisher.

roots in the notion that the future job performance of a particular candidate may be predicted at the time of selection on the basis of relatively enduring and stable characteristics of that candidate. In their seminal article, Binning and Barrett (1989) shed light on the inferences that are made in personnel selection research (see Figure 1) by providing three approaches to establishing the validity of a predictor measures, namely 1) the content- related approach; 2) the criterion-related approach; and 3) the construct-related approach. These approaches will be explained in the following.

It is important to note that all of the inferences (the numbered arrows within the model) are geared towards providing support for inference 9, the relationship between the predictor measure and the performance domain. This inference may be thought of as the “holy grail” of personnel selection research. Please note that all of the terms in ovals in Figure 1 represent psychological constructs that are sampled by some measure. These measures are represented by boxes.

Binning and Barrett’s (1989) definition of the performance domain as a subset of all possible behaviors that contribute to organizational goals and objectives seems to closely mirror Thorndike’s (1949) "ultimate criterion". The ultimate criterion denotes the complete domain of performance and includes everything that ultimately defines success on the job. From this definition it readily becomes apparent that the ultimate criterion is a platonic ideal in that it is highly improbable that all employee behaviors that could be construed as contributing to success can ever be measured. This being the case, absolute support for inference 9 is unlikely to be found in research. Thus, rather than attempting to assess the ultimate criterion, either a predictor or a criterion measure is used to sample the performance domain. Binning and Barrett have named the first approach, where a predictor measure such as the work sample test that is common to the assessment center directly taps into the performance domain, the content-related approach to establishing validity. This approach is represented by inference 9 (see Figure 1). They have labeled the second approach, where a predictor measure is used to predict a criterion that samples the performance domain, the criterion-related approach to establishing validity. Within the criterion-related approach, the researcher needs to provide support for two inferences (namely 5 and 8) rather than just inference 9. Thus the researcher needs not only to demonstrate predictive validity of the predictor measure onto the criterion measure (inference 5), but also needs to demonstrate that the criterion measure adequately samples the job performance domain (inference 8). Demonstrating

evidence for inferences 17, 18 and 19 can provide additional support for inference 5. The criterion-related approach to validation is largely empirical in nature in that it hinges upon the demonstration of an empirical relationship between some predictor and a measure that has been designed to adequately and accurately sample the performance domain. The third and final approach to establishing validity is called the construct-related approach to establishing validity. The construct-related approach involves the identification of psychological construct domains that overlap with the performance domain (inference 7), and then developing predictors that tap into this domain (inference 6). As can be derived from Figure 1, this is an alternative and a more theoretical approach to providing support for inference 9 than either the content-related or the criterion-related approaches. Although the content-related approach is exclusively concerned with providing support for inference 9, it is important to note that in this case the complete performance domain is not assessed in full, but that rather it is sampled by the predictor measure. According to Binning and Barrett (1989, p. 483) the danger of solely relying on a criterion-related approach to validating predictor measures is that "at its worst it represents an atheoretical and circuitous, if not an entirely misleading route to predictor development (e.g., "dust-bowl empiricism)". Therefore, Binning and Barrett recommend that the criterion-related approach be used as an empirical research strategy for confirming the quality of either the content-or construct-related approaches.

A full review of the Binning and Barrett (1989) framework is beyond the scope of this introduction and it is certainly not the aim of each study in this dissertation to address the model in all its peculiarities. Rather, it is provided here as a guiding meta-theoretical framework that elucidates the complexities of personnel selection research. A complete implementation of the model is highly laborious, and the vast majority of empirical researchers have too short a productivity cycle to be able to address the model fully within a single study.

Binning and Barrett (1989) were aware of the laboriousness of complete implementation of the model, and attempted to redefine the relationship between the personnel selection researcher and the organization by calling for 'experimenting organizations', where "through successive approximations … desired organizational systems … [are] ... built through a series of trials in which failures are considered as informative as successes" (p. 490). Thus, although it is not the aim of this dissertation to address the entire model, it is investigated whether at least a number of the

inferences that Binning and Barrett (1989) describe, may be supported within the cross-cultural industrial organizational-studies that are presented here.

1.2 Foci of this dissertation in terms of the Binning and Barrett (1989) inferences

The studies that are presented within this dissertation focus particularly on generating inferential and or evidential support for inferences 5, 6, 7, 8, 9, and 14-16, thereby concentrating exclusively on the construct- and criterion-related validity approaches. As such, the studies in this dissertation are not concerned with the content-related validity approach.

In order to provide a state of the art of previous research and to identify important hiatuses in expatriate selection, Chapter 2 commences with presenting the findings of a meta-analysis into the prediction of expatriate job performance, and sets out to provide support mainly for inferences 5 and 8, the criterion-related validation route. Further, inference 6 was partially addressed by examining whether predictors of expatriate job performance that had been used in 30 primary studies that were traced, could be meaningfully combined to reflect the latent variables in the underlying psychological construct domain. The theoretical grounds for the hypotheses that are presented within Chapter 2 provide partial support for inference 7. Similarly to inference 6, inference 8 was partially addressed in deciding whether the criteria that had been used in the 30 primary studies could be meaningfully combined to reflect the performance domain. Inferences 14, 15, and 16 were partially addressed in examining to what extent a measure of non-work behavior, namely expatriate adjustment, was related to expatriate job performance. On the basis of the support found for all of these inferences, the conclusions of the meta-analysis are stated in terms of inference 9.

A number of the hiatuses identified within the meta-analysis had to do with the criterion measures that have typically been used in expatriate management research. Therefore, the theoretical Chapter 3 attempts to highlight some of the underlying issues by further delving into inference 8. This chapter thus addresses the quality of criterion measurement for expatriates. The reason for conducting this theoretical investigation was that much of the extant expatriate management literature

was found to focus on a particular outcome variable, namely adjustment, that more closely reflects a measure of non-work behavior than a criterion measure in the Binning and Barrett (1989) sense of the word. Therefore this chapter attempts to argue that personnel decisions cannot be defensibly made on the basis of the findings of such research, and a number of propositions are voiced that are intended to facilitate research into selection context predictors of expatriate job performance.

On the basis of the main findings of Chapters 2 and 3, Chapter 4 partially addresses inferences 5-9. It presents the validity findings of a study that employed multiple selection context predictors and multiple criteria in the prediction of expatriate job performance. Most of the predictors used in this study are supported within the meta-analysis as having predictive validity in explaining variance in expatriate job performance. Yet, the meta-analysis was limited in the sense that it did not allow for the investigation of predictors that had seldom or never been investigated among expatriates, such as intelligence for example. In addition, the meta-analysis did not allow for the simultaneous investigation of predictors operating in unison and related issues pertaining to multicollinearity among predictors could thus not be further investigated. Furthermore, the meta-analysis employed a unidimensional job performance criterion, whereas many scholars have argued for the multidimensional nature of the construct (a finding that is further elaborated upon in chapter 3). Chapter 4 addresses these issues by examining the relationships between multiple predictors and criterion measures (inference 5), including a number of predictors that had seldom or never been investigated. Inference 6, pertaining to the construct validity of the predictor measure, is addressed in this study by relying mostly on existing and previously validated operational measures of the various predictor domains. Both inferences 6 and 7 are addressed by the theoretical arguments leading up to the different hypotheses. Inference 8 is addressed in this chapter through the development of a measure of behaviors in the expatriate job performance domain and measures for subdimensions of the expatriate job performance domain.

Having identified which predictors relate to expatriate job performance, Chapter 5 presents a framework for increasing the utility of these predictors in applied expatriate selection. Thus, Chapter 5 does not focus on the optimization of the validity of selection context predictors, but rather on alternative determinants of the number of successful employees in the organization's expatriate population. In doing so, this chapter recognizes the fact that even full support for all of the inferences in the

Binning and Barrett (1989) framework is not sufficient for practical expatriate personnel decision making. That is, the selection ratio (i.e. the ratio of the number of persons hired to the number of available applicants), may thwart the utility of selection context predictors, no matter how strong their support in terms of the Binning and Barrett inferences may be. In situations in which the selection ratio approaches one, (nearly) every candidate needs to be hired notwithstanding their qualifications for the job. In this case the ability to discriminate between suitable and unsuitable candidates becomes less and less useful (cf. Taylor & Russell 1939). It is argued in Chapter 5 that the selection ratio may be decreased by increasing the expatriate candidate pool. Therefore, and since organizations seem to select mostly from their own domestic employee pool, this chapter aims to lay the foundations for a framework by which organizations may increase their expatriate candidate pool. As will be argued, this mechanism hinges strongly on the ability to predict the expatriation willingness of domestic entry level employees. As such, it is postulated that by heeding expatriation willingness in domestic entry level personnel decision making, organizations may acquire a larger expatriate candidate pool to select from.

Chapter 6 is not concerned with expatriates, but rather focuses on the adequate and accurate assessment of performance (inference 8) in cultures that emphasize an interdependent view of the self (Markus & Kitayama, 1991). Due to the fact that within such cultures people are thought to construe their self on the basis of their relationships with others, it is argued that the performance rating process necessary for validating predictor measures (inferences 5, 8 and ultimately 9) might serve to disrupt group harmony (Aycan & Kanungo, 2001; Davis, 1998). Using the South African case, it is explored whether a training performance criterion measure for police trainees at the South African Police Services (SAPS) more accurately reflects the underlying performance domain (inference 8), when it is controlled for biases that are inherent in person perception. Through the utilization of Kenny's (1994) Social Relations Model this study explicitly recognizes that the process of rating an employee's performance is a special case of person perception and attempts to disentangle rater (i.e., the person doing the rating), ratee (i.e., the person being rated) and relationship (i.e. between the rater and the ratee) variance in ratings of performance. Specifically, this study set out to examine whether the ratee variance component for two criterion measures might be predicted on the basis of two selection context individual differences variables, namely emotional stability and

conscientiousness. Thus, this study partially addresses inferences 5 and 8-9. Although Chapter 6 is not directly concerned with expatriates, insofar as the performance rating process is found to be different in interdependent cultures, as opposed to independent cultures, there are important implications for both the science and practice of expatriate management.

At the end of this dissertation (i.e., in the discussion Chapter 7), we will integrate the findings from the different studies and we will list the implications for expatriate management.

1.3 Brief introduction of the characteristics of the main constructs employed in this dissertation

Having discussed some of the intricacies of personnel psychological research and having laid the foundation of this dissertation in terms of the overarching Binning and Barrett (1989) framework, we now turn to a brief consideration of some of the constructs that were typically employed within this dissertation to operationalize the criterion and the predictor respectively. The discussion of these different constructs, namely job performance, the Five Factor Model, and alternative predictors that match the criterion in specificity and content, will result in three research questions.

Job performance is typically defined in terms of behavior and or the outcomes of such behavior (cf. Binning & Barrett, 1989). In addition, definitions of performance typically include a value component, in the sense that the behavior and or outcome must contribute to the goals of the organization in one way or another. For example, Motowidlo (2003) has defined job performance "as the total expected value to the organization of the discrete behavioral episodes that an individual carries out over a standard period of time" (p. 39). It follows from this definition that part of the domain of valued work behaviors can be expected to vary across differing jobs. For example, assertiveness may be a vital performance behavior for a manager involved in negotiations. Yet, it might be counterproductive for a customer service representative or a flight attendant who might be expected to be agreeable. In addition it is important to note that that which is considered valuable work behavior can be expected to fluctuate across cultures. Thus, although taking initiative might be very

indicative of effective performance in The Netherlands, it might be counterproductive in more dutiful cultures such as Japan (Dore, 1987).

This variable part of the performance domain is difficult if not impossible to assess for the expatriate population as a whole, since expatriates hold different jobs in differing cultural contexts. This implies that a more situationally specific approach would need to be employed in which the expatriate sample is far more homogeneous in terms of home and host countries and particular jobs, than has typically been the case in expatriate management research (see Chapter 2). The fact that there seems to be a general factor in ratings of job performance across jobs (Viswesvaran, Schmidt, & Ones, 2005) indicates, however, that there might be a considerable convergence in the behaviors that employees in differing jobs and differing work contexts engage in. Indeed in their domestic study, Viswesvaran et al. (2005) demonstrated that 60% of the variance in performance ratings across jobs and work contexts could be accounted for by a general factor in job performance, after having controlled for halo and other sources of measurement error. However, there is less evidence for the cross-cultural invariance of ratings of job performance. In a study aimed at this topic, Ployhart, Weichmann, Schmitt, Sacco and Rogg (2003) concluded that although performance ratings demonstrated a basic level of measurement invariance across cultures, latent performance (in the structural equation modeling sense) may not be cross-culturally invariant. These findings imply that studies that attempt to predict expatriate job performance using expatriates who hold differing jobs in differing cultural contexts are prone to suffer from criterion deficiency, in the sense that both the job and the culture specific performance components are unlikely to be sampled accurately. Essentially, the question here is whether a nomothetic approach to the study of expatriate selection is tenable, or metaphorically: Can we study fruit or is the comparison of apples and oranges not warranted in this regard? Any attempt to conduct research on more narrowly defined expatriate subpopulations may result in findings that do not generalize to the expatriate population as a whole. Yet, the findings of such studies are more likely to be a more accurate reflection of the criterion under investigation than a study that focuses on the expatriate population as a whole. In other words, studies in expatriate management that focus on the broadly defined expatriate are bound to exhibit greater degrees of error variance. This paradox can be thought of as an unavoidable evil of research in expatriate management. Despite this, knowledge of which predictors relate to the cross-cultural and cross-job

general performance factor that was postulated within the above is assumed for the purposes of this dissertation, to be an adequate albeit less than optimal operationalization of expatriate job performance. We will return to this topic within the discussion section. The arguments relating to the assessment of performance in the cross-cultural industrial organizational context that were reviewed in the above, lead us to the first research question that is addressed within this dissertation:

> *Research question 1*: Can performance be adequately and accurately assessed in the cross-cultural industrial and organizational psychological context (i.e. across jobs and cultural contexts), and can it be related to individual differences variables that might be employed for purposes of personnel selection?

Partial answers to this question are provided in Chapters 2, 3, 4, and 6. That is, Chapter 2 attempts to demonstrate that the Five Factor Model (FFM) dimensions and other predictors that had been investigated in the primary studies can be meaningfully related to a generic expatriate job performance domain. Chapter 3 further delves into the issue of performance assessment among expatriates and offers a number of propositions for its adequate and accurate assessment. Chapter 4 describes the results of a study that examines the predictive validity of a large battery of selection context predictors on multiple dimensions of expatriate job performance. Finally, Chapter 6 assesses whether different biases that have been distinguished within the person perception literature may be removed from performance ratings of trainees at the South African Police services, to yield better prediction. Please note that this dissertation is by no means limited to a consideration of the Binning and Barrett (1989) framework, the FFM dimensions and performance. Yet, since these topics are so closely intertwined with the studies that are presented in this dissertation they are discussed in this introduction. Other theories that support the hypotheses presented within each of the studies that follow, are referred to within the prospective chapters. Within the following, first the grounds for investigating the FFM framework in the intercultural context will be summarized, after which research question 2 will be regarding the FFM framework will be presented. Subsequently, it will be postulated that the choice for alternative predictor inclusion may be made by examining to what extent predictors and criteria match in terms of their specificity.

The Five Factor Model

As mentioned earlier, predictor measures used to make personnel selection decisions are considered to be stable and relatively enduring characteristics of the candidate that may either sample the performance domain directly (as is the case in the content-related approach delineated earlier), or that are used to predict a criterion measure that samples the domain of performance behaviors or outcomes (cf. Binning & Barrett, 1989).

Smith (1994) in his theory of valid predictors in personnel selection has stated that work samples and cognitive ability tests have the highest predictive validity, that structured interviews, biodata, assessment centers and peer assessment have moderate predictive validity and that personality tests have low to moderate predictive validity. These findings are generally in line with Schmidt and Hunter's (1998) review of 85 years of research into personnel selection. On the basis of a validity maximization strategy researchers might thus be tempted to pick work samples, cognitive ability, structured interviews, biodata, assessment centers and peer-assessment over personality in the prediction of job performance. Yet, it seems that personality tests are likely more practical in the cross cultural industrial and organizational context in that their usage is not constricted by factors such as 1) time invested in predictor development (as would be the case for assessment centers, work samples and structured interviews); 2) job type (as would be the case for assessment centers, work samples and structured interviews); and 3) the availability of peers (as would be the case for peer assessment). And although this dissertation does examine the predictive validity of biodata and cognitive ability, these predictors will not be discussed within this introduction but rather within Chapters 2 and 4. The validity of biodata in predicting expatriation willingness also plays an important role in Chapter 5. The following therefore focuses on introducing the FFM model.

The personality model that has received most attention in personnel selection research is the Five Factor Model (FFM) of personality (Costa & McCrae, 1985), colloquially known as the "Big Five". The FFM consists of the following bipolar dimensions: emotional stability, extraversion, openness, agreeableness, and conscientiousness, each of which has been shown to have value in predicting a wide range of criteria, including job performance and training performance (see for example, Barrick & Mount, 1991), and the construct validity of which have been shown to be cross-culturally invariant in work settings (Salgado, Moscoso, & Lado,

2003a). Mischel (1968) coined the term 'personality coefficient' to reflect the fact that correlations of personality variables with criteria typically lie at around the .30 level, which implies that only 10% of the variance in a criterion can be accounted for by personality. According to Salgado et al. (2001), an additional influential criticism of the use of personality measures in selection research was voiced by Guion and Gottier (1965, p. 168), who on the basis of their review concluded that:

> "It is difficult… to advocate with a clear conscience, the use of personality measures in most situations as a basis for making employment decisions about people… It is clear the only acceptable reason for using personality measures as instruments of decisions is found only after considerable research with the measure in the specific situation and the specific purpose for which it is to be used."

Although the work by Mischel (1968) and that by Guion and Gottier (1965) are typically held responsible for the demise of research into personality as a predictor during the 1970's and 1980's, the publication of a number of meta-analyses in the 1990's led to a revival (Salgado et al., 2001). One major conclusion of Barrick and Mount's (1991) meta-analysis was that the validity of conscientiousness generalizes across jobs and settings (see also Salgado et al., 2001). This and the fact that the FFM has been shown to be cross-culturally invariant in work settings (Salgado, Moscoso et al., 2003a), led to the expectation that the FFM dimensions might be usefully employed as predictors in the cross-cultural industrial and organizational psychological context. This finding taken together with Guion and Gottier's (1965) call for research with personality measures in the specific situation and with the specific purpose for which it is to be used, led to the following research question.

> *Research Question 2*: Can the FFM dimensions be usefully employed as predictors of various outcomes (i.e., job and training performance and expatriation willingness) within the cross-cultural industrial-organizational psychological context?

Chapters 2 and 4 are both concerned with exploring this question vis-à-vis expatriate job performance, the former by means of meta-analytic techniques and the

latter by means of a field study using a sample of on the job expatriates. Chapter 3, being the theoretical chapter aimed at the adequate and accurate assessment of expatriate effectiveness, does not belong to this list. In Chapter 5 this question is explored vis-à-vis the expatriation willingness of potential domestic entry level job applicants, and Chapter 6 finally explores this question vis-à-vis the performance of trainees at the South African Police Services.

Predictor-criterion alignment

Of course other predictors than the FFM may be postulated to relate to the various outcomes (job and training performance and expatriation willingness) investigated in this dissertation. Indeed a third theme of this dissertation is to compare and contrast the predictive power of a large number of alternative predictor measures with the predictive power of the FFM in explaining variance in the criteria employed within the various studies. The characteristic on which predictors will be compared and contrasted is their alignment with the criterion in terms of their specificity. Although chapter 6 is limited to an investigation of the predictive validity of two FFM dimensions (namely emotional stability and conscientiousness) in explaining variance in training performance, the other empirical chapters (namely Chapters 2, 4, and 5) explore relations with the respective outcome measures of a myriad of other predictors. For example, the meta-analysis that is presented in Chapter 2 includes expatriate specific predictors of expatriate job performance such as cultural flexibility and cultural sensitivity and biodata such as local language ability. Although the meta-analysis is necessarily limited to a comparison of the bivariate (i.e., predictor-criterion) relationships, Chapters 4 and 5 attempt to highlight differences in predictive power by examining a predictors' performance when it is in direct competition with other predictors in explaining variance in the criterion. Although a full review of all of the predictors examined in this dissertation is beyond the scope of this introductory chapter, one of the main premises of the studies presented here is that differences in predictive validity may be expected on the basis of theory. In essence, the overriding thought is that predictors that match the criterion in terms of specificity and content will demonstrate higher validity than predictors that do not (cf. Ashton, 1998; Schneider, Hough, & Dunnette, 1996; Tett, Guterman, Bleier, & Murphy, 2000). Whereas a conceptually broad criterion, i.e. job performance, is investigated in Chapters 2 and 4, the expatriation willingness construct is much more specific. Based

on the aforementioned thought that predictors that match the criterion in specificity will demonstrate higher validity, it may thus be hypothesized that broad predictors, such as the FFM dimensions will do a good job of predicting the broad job performance criterion, whereas expatriation willingness will be better predicted by more specific predictors that match this criterion in content. Examples of such specific predictors are biodata that inquire about past experiences relating to behaviors that are indicative of past willingness to go to travel to and reside in foreign countries. This led us to our third and final research question:

> *Research Question 3*: Will predictors that match the criterion in specificity and content demonstrate a higher predictive validity than predictors that do not?

Having introduced the main themes of this dissertation and formulated the three research questions, the following Chapter 2 presents the findings of a meta-analytic investigation aimed at the prediction of expatriate job performance.

Chapter 2

Predicting Expatriate Job Performance for Selection Purposes: A Quantitative Review[*]

This chapter meta-analytically reviews empirical studies on the prediction of expatriate job performance. Using 30 primary studies (total N=4046), it was found that predictive validities of the Big Five were similar to Big Five validities reported for domestic employees (Barrick & Mount, 1991; Hurtz & Donovan, 2000; Salgado, 1997; Tae & Byung, 2002). Extraversion, emotional stability, agreeableness, and conscientiousness were predictive of expatriate job performance; openness was not. Other predictors that were found to relate to expatriate job performance were cultural sensitivity and local language ability. Cultural flexibility, selection board ratings, tolerance for ambiguity, ego strength, peer nominations, task leadership, people leadership, social adaptability, and interpersonal interest emerged as predictors from exploratory investigations (K<4). Surprisingly, intelligence has seldom been investigated as a predictor of expatriate job performance.

[*] The Corresponding reference is: Mol, S.T., Born, M. Ph., Willemsen, M.E., & Van Der Molen, H.T. (2005). Predicting expatriate job performance for selection purposes: a quantitative review. *Journal of Cross-Cultural Psychology, 36*(5), 590-620.

Research aimed at improving expatriate selection practices shows characteristics of a domain in its pre-paradigmatic state. According to Kuhn (1962), the pre-paradigmatic period is typified by a lack of cohesion and consensus about research methods and objects, by the appearance of schools of thought, and by a conflict between these schools.

Although there is little evidence of a conflict, the lack of cohesion and consensus about research objects is striking within the expatriate management literature. On the basis of either a theory or a review of earlier empirical work, many authors (e.g., Arthur & Bennett, 1995; Brislin, 1981; Gudykunst & Hammer, 1984; Hannigan, 1990; Jordan & Cartwright, 1998; Kealey, 1996; Kealey & Ruben, 1983; Leiba-O'Sullivan, 1999; Mendenhall & Oddou, 1985; Ones & Viswesvaran, 1997; Ronen, 1989) have compiled substantive lists of predictors that almost consistently show more uniqueness than overlap when compared to one another. For example, while Arthur and Bennett (1995) identify job knowledge and motivation, relational skills, flexibility/adaptability, extra-cultural openness and family situation as factors that appear to contribute to international assignment success, Ones and Viswesvaran (1997) focus on the Big Five personality dimensions (emotional stability, extraversion, openness to experience, agreeableness, and conscientiousness) in the prediction of aspects of expatriate success. It is difficult to find a common denominator within these lists (cf. Sinangil & Ones, 2001).

The quest for consensus on the criterion side of the equation has not fared much better. In this respect Arthur and Bennett (1995) note that more than five decades of research on expatriate selection has failed to yield a clear and explicit knowledge structure of what it is we should be training and selecting for. Evidence for different schools of thought may be found in the fact that some researchers seek an answer to this criterion issue in the expatriate's adjustment (e.g., Black, 1990), while others (e.g., Dalton & Wilson, 2000) emphasize the expatriate's job performance as the criterion of choice.

Although the antecedents and consequences of expatriate *adjustment* have been well documented (see Bhaskar-Shrinivas, Harrison, Shaffer, & Luk, 2005; Hechanova, Beehr, & Christiansen, 2003, for meta-analytic reviews), many authors within the expatriate management literature have lamented the unavailability of *job performance* criteria for expatriates (see for example Arthur & Bennett, 1995, 1997;

Hawes & Kealey, 1979; Kealey & Protheroe, 1996; Mol, Born, & Van der Molen, 2005; Ones & Viswesvaran, 1997; Sinangil & Ones, 2001; Werner, 2002).

Nevertheless, there has recently been an increase in empirical publications vis-à-vis expatriate job performance. This is affirmed by two meta-analytic publications about the relationship between training and expatriate job performance (see Deshpande & Viswesvaran, 1992; Morris & Robie, 2001). To our knowledge, however, a quantitative review of the relationship between selection context predictors and expatriate job performance has never been executed. Since an appreciation of criterion-related validities of predictor measures could prove to be invaluable for selection purposes, the time has come for a critical examination of these studies. In this way, future directions for research and theory-building may be identified and prioritized.

This chapter aims to meta-analytically review empirical studies to answer the following question: What are the (most promising) predictors of expatriate job performance? Meta-analytic procedures were employed whenever technically feasible (i.e., whenever the number of primary studies for a particular relationship exceeded one). Theoretical support for expected relationships, and our hypotheses are presented after the central terms in our review namely *expatriate*, *criterion* and *predictor* are defined. Such definition is necessary because ambiguity in terms makes it difficult to integrate theoretical deliberations and research findings. In his chapter on expatriate selection, Deller (1997) for instance has aptly coined the existing ambiguity in the criterion domain a "Babylonian confusion of criteria" (p. 97).

For the definition of the *expatriate* we follow Aycan and Kanungo (1997), who have defined expatriates as "…employees of business and government organizations who are sent by their organization to a related unit in a country which is different from their own, to accomplish a job or organization-related goal for a pre-designated temporary time period of usually more than six months and less than five years in one term." (p. 250).

The second term that needs to be defined is *criterion*. The previously cited Babylonian confusion of criteria is especially pervasive within the realm of expatriate management. In fact, Deller's (1997) understanding of the criterion, which includes adjustment, seems much broader than the frequently cited Austin and Villanova (1992) definition. The latter definition, which has become a convention in the field of personnel psychology, states that "A criterion is a *sample of [job] performance*

[italics added] (including behavior and outcomes), measured directly or indirectly, perceived to be of value to organizational constituencies for facilitating decisions about predictors or programs." (p. 838). Although many other definitions of criteria may be found within the extant literature, this review will be limited to a discussion of criteria that are in accordance with the aforementioned Austin and Villanova (1992) definition.

A myriad of other variables such as family situation (i.e., the ability of the expatriate's family to adjust to living in a foreign environment), spouse adjustment and other family related variables (Tung, 1981), adjustment to living abroad (Hough & Dunnette, 1992) and cross-cultural adjustment (Caligiuri, 1997) have been investigated as dependent variables in validation research. However, it is our opinion that these may constitute important *correlates* of expatriate job performance rather than operationalizations of expatriate effectiveness (see also Mol et al., 2005; Sinangil & Ones, 1997; Sinangil & Ones, 2001).

The final term that needs to be defined is *predictor*. For our purposes, we define the predictor as any selection-context individual differences variable that may be used to forecast a criterion (cf. Binning & Barrett, 1989).

2.1 The Big Five dimensions as predictors of expatriate job performance

A major issue in expatriate management research has been the apparent lack of interest in investigating whether domestic findings may be generalizable to the expatriate context. Indeed the most valid predictors of domestic[1] job performance, being the work sample test, the cognitive ability test, and the structured interview (Robertson & Smith, 2001; Schmidt & Hunter, 1998), have seldom or never been investigated in relation to expatriate job performance (see Table 2). It appears that for a long time research was based on the premise that employees are from Venus and expatriates are from Mars. Other domestic predictors such as the Big Five personality

[1] Please note that the word 'domestic' is used within this chapter as an antonym for expatriate. Thus, a domestic employee is a non-expatriate employee.

dimensions (i.e., extraversion, emotional stability, agreeableness, conscientiousness, and openness), have only since the change of the millennium received any (research) attention within the expatriate context (see Table 2). This state of affairs is in stark contrast with the amount of research that has been conducted into the Big Five dimensions as predictors of domestic job performance. The fact that domestic meta-analyses from all corners of the world have been published within the last fifteen years or so (see Barrick & Mount, 1991; Hurtz & Donovan, 2000; Salgado, 1997; Tae & Byung, 2002; Tett, Jackson, & Rothstein, 1991) illustrates this point. Mischel (1968) is cited within the domestic personnel selection literature as being partly responsible for the decline of personality psychology in the 1960's (Hogan & Roberts, 2001). It is intriguing that his often cited notion of the 'personality coefficient', "… coined to describe the correlation between .20 and .30 which is found persistently when virtually any personality dimension inferred from a questionnaire is related to almost any conceivable external criterion involving responses sampled in a different medium" (Mischel, 1968, p. 78) appears to be based in part on his earlier work among Peace Corps expatriates and his evaluation of other Peace Corps studies (cf. Sinangil & Ones, 2001).

Personality psychology has made an undisputable comeback, despite the fact that within domestic personnel selection the notion of the personality coefficient appears to be as valid today as it was several decades ago (cf. Barrick & Mount, 1991; Hurtz & Donovan, 2000; Salgado, 1997). Thus, rather than solely attributing this resurgence to the fact that meta-analytic reviews signaled that "personality measures were more valid than generally believed" (Hogan & Roberts, 2001), we believe that this resurgence should be attributed to an increased realization of the potential utility of personality measures.

The expected difference in profit and cost between an excellent employee and a poor employee is much larger for expatriates than it is for domestic employees. Under these circumstances, even a predictor with a small-to medium predictive validity can result in a substantial improvement in utility. Interpreted in this way, the fact that personality psychology has made a comeback in selecting domestic employees certainly makes a case for a comeback of personality psychology within the expatriate selection context. Especially when one considers that recent research has demonstrated that the five-factor model is cross-culturally invariant (Ones & Anderson, 2002; Salgado, Moscoso, & Lado, 2003a). However, what remains to be

demonstrated is that the Big Five are at least as predictive of expatriate job performance, as they are of domestic job performance.

Church (2000) on the basis of his review of the literature on culture and personality, has noted that there is "ample evidence of the validity of personality traits in predicting societally relevant criteria across cultures, with very preliminary indications that trait-criterion relationships may be weaker in … [individuals from collectivistic] …cultures" (p. 663). Judging from our set of primary studies (see Table 1) it emerged that expatriates were typically nationals of Western countries, and as such, it was assumed that trait-criterion relationships would not be affected by the finding that such relationships might be weaker in collectivistic cultures. Caligiuri (2000) and Ones and Viswesvaran (1997) argue that each of the Big Five dimensions should relate positively to expatriate job performance and do not see any reasons why these dimensions should not be related to job performance which takes place in another country than one's home country. This led us to the following hypothesis:

> Hypothesis 1(a-e): All of the Big Five personality dimensions, i.e., extraversion (1a), emotional stability (1b), agreeableness (1c), conscientiousness (1d), and (1e) openness, will relate positively to expatriate job performance.

Second, and relatedly, it was examined whether the size of the validities of the Big Five in predicting domestic job performance would generalize to an expatriate context. Although, the expatriate context is markedly different from the domestic context (i.e., the expatriate has to adjust to living and finding his way in another country), we believe these differences will pertain mainly to the expatriate's non-work lives. In the end, an expatriate at work will be expected to exhibit a behavioral repertoire, which is highly similar to that of a domestic manager, namely, task oriented activities in a social context. For effectively demonstrating such behaviors, all Big Five personality dimensions will have predictive validity. Thus, although some of the intercultural exchanges that an expatriate may engage in at work might call for some behaviors that do not belong to the criterion domain of a domestic employee, it is argued here that at work the work context will override the cultural context in determining the predictive validities of the Big Five dimensions. According to Ones and Viswesvaran (1999) the results of policy capturing studies with regard to the

relative *perceived* importance of personality dimensions for expatriate selection and domestic selection are generally consistent (cf. Dunn, Mount, Barrick, & Ones, 1995). It was hypothesized that this finding would be corroborated empirically, leading to the following hypothesis:

> Hypothesis 2(a-e): Domestic and expatriate findings regarding the relationship between the Big Five personality dimensions, i.e., extraversion (2a), emotional stability (2b), agreeableness (2c), conscientiousness (2d), and (2e) openness will not differ.

Third, it was examined whether the validities of the Big Five dimensions in predicting expatriate job performance would be moderated by self- versus other-ratings of performance. Such moderation is quite pertinent to expatriate management researchers, since in practice obtaining performance evaluations from others is often unattainable. In their domestic meta-analysis, Harris and Schaubroeck (1988) found major differences between self- and other-ratings of performance. In addition, Mount, Barrick and Straus's (1994) domestic data indicate that other-ratings of the Big Five personality dimensions account for more criterion variance than self-ratings, with the criterion itself being a supervisor rating. However, they did not examine whether the same holds true for the relationship between self rated personality versus self-and other-ratings of performance. That is, does criterion rater type (self vs. other) moderate the predictive validity of the Big Five? It is known that self-ratings of performance are likely to be inflated due to defensiveness on the part of the rater, leading to a more positive evaluation than ratings provided by others. According to Harris and Schaubroeck, "this would lead the self-ratings to have a restricted range, thereby attenuating the correlation between self- and others' ratings" (p. 45). Their data however indicated that although self-ratings were inflated, this inflation remained the case even after correcting for this range restriction. Thus, they found no direct effect of defensiveness on this inflation. Although Harris and Schaubroeck subsequently set out to see whether the moderator of defensiveness was itself somehow moderated, the following is hypothesized for the purposes of the present investigation:

Hypothesis 3(a-e) The predictive validities of the Big Five personality dimensions, i.e., extraversion (3a), emotional stability (3b), agreeableness (3c), conscientiousness (3d), and (3e) openness will be lower for self-rated expatriate job performance than for other-rated expatriate job performance.

2.2 Expatriate context-specific variables as predictors of expatriate job performance

Within the above, it was argued that the Big Five personality dimensions, which traditionally have been applied within the domestic context, will explain a non-trivial amount of expatriate criterion variance. This, however, does not rule out that expatriate context specific predictors (cf. Fernandez de Cueto, 2004) of expatriate job performance may explain additional variance. Indeed, it is quite plausible that expatriate context-specific predictors, such as cultural sensitivity for example, could explain additional variance in an expatriate-specific criterion domain (see Caligiuri, 1997; Caligiuri & Day, 2000's assignment-specific performance). Although assignment-specific performance has seldom been assessed in studies that have been aimed at the prediction of expatriate job performance, there is some evidence to suggest that raters implicitly include assignment-specific performance in their ratings of overall performance. Indeed, Liu (2003) found a high correlation (r = .67, p < .05, N = 101) between these performance sub-dimensions and Caligiuri (1997) found an average correlation (over self, leader, and peer ratings) of (r = *.24*, p < .05, N = 115) between expatriate-specific performance and overall performance. It was therefore anticipated that expatriate context-specific predictors (such as local language ability) relate to expatriate overall performance. So, in addition to the Big Five factors, meta-analyses were conducted on other predictor variables, namely: local language ability, cultural sensitivity, previous international experience, and flexibility. Hypotheses for the relationships of these variables with expatriate job performance are presented below.

Although the English language has become quite standard in the globalized economy, for many expatriates it may be a second or even a third language. In addition, English may not be widely understood in the host country. Therefore, it may be expected that *local* language ability (see Clegg & Gray, 2002) is a crucial factor to

effective performance. Indeed nearly every expatriate in a survey conducted by Oddou and Mendenhall (1991) felt that having an ability to communicate with foreign nationals was as, if not more, important to successful job performance than technical competence. In this context Oddou and Mendenhall (Oddou & Mendenhall, 1991) note that "regardless of how much an expatriate knows, if he or she is unable to communicate with and understand the host nationals, the work will not get done." (p. 369). Jordan and Cartwright (1998) based on their review of the literature pertaining to the selection of international managers, also identified linguistic skills as a core selection competency for international assignments. From this, the following hypothesis is derived:

> Hypothesis 4: Local language ability will relate positively to expatriate job performance.

Cultural sensitivity facilitates an understanding of the host country nationals. It was defined by Chen and Starosta (2000, p. 409) as "an individual's ability to develop a positive emotion towards understanding and appreciating cultural differences that promotes appropriate and effective behavior in intercultural communication". As such, cultural sensitivity may be expected to positively affect expatriate job performance. That is, an expatriate who routinely violates the norms and values of local colleagues, clients and the general public, is unlikely to excel. On the basis of their review of the literature, Jordan and Cartwright (1998) identify cultural sensitivity as a competency that cannot be omitted in an assessment of suitability for selection. It is therefore hypothesized that:

> Hypothesis 5: Cultural sensitivity will relate positively to expatriate job performance.

Aycan (1997) states that "in [the] face of demanding circumstances (domestic or international), experience may be more valuable than knowledge to guide individuals in finding sound solutions to problems." (p. 17). In addition, Torbiorn (1997) has suggested previous international experience to be important. Finally, Bell and Harrison (2002) proposed that expatriate adjustment would lead to further and

future development of bicultural competencies. Because these bicultural competencies may serve to facilitate performance, it is hypothesized that:

Hypothesis 6: Previous international experience will relate positively to expatriate job performance.

Arthur and Bennett (1995) identified flexibility as one of five factors perceived by expatriates to contribute to success. In fact, flexibility ranked second, surpassed in perceived importance only by family situation. Ronen (1989) in his review on expatriate selection and training also identified flexibility as an attribute of success in overseas assignments. It was therefore hypothesized that flexibility, which for the purposes of the present investigation is defined as "…the capability to accept new ideas and see more than one's own way of approaching and solving problems" (Tucker, Bonial, & Lahti, 2004, p.230) would be predictive of expatriate job performance:

Hypothesis 7: Flexibility will relate positively to expatriate job performance.

2.3 Adjustment as an on-assignment correlate of expatriate job performance

On-assignment adjustment may not be used as a predictor of expatriate job performance. However, the magnitude of the relationship between (on-assignment) adjustment and performance is highly relevant to future theoretical developments in the prediction of expatriate job performance (e.g., perhaps it moderates this relationship). In addition, the demonstration of an empirical linkage between adjustment and performance may serve to reconcile the previously mentioned dissimilar schools of thought regarding the criterion of choice. Therefore, the relationship between facets of expatriate adjustment and performance is meta-analytically investigated within this review.

Black (1988) was among the first to suggest that adjustment is a multi-faceted construct. Factor analysis of an eleven-item adjustment scale administered to

American expatriates employed in Japan revealed the following three factors: general adjustment (i.e., adjustment to general living conditions and everyday life), interaction adjustment (i.e., adjustment to interacting with locals), and work adjustment (i.e., adjustment to work responsibilities) (Black, 1988). These facets have been replicated countless times within the expatriate management literature (see Bhaskar-Shrinivas et al., 2005; Hechanova et al., 2003, for meta-analytic reviews).

In his original study, Black (1988) did not assess (supervisor-rated) performance because he felt this would unnecessarily restrict response rates. However, Black pointed to the relationship between adjustment and performance, when he stated that "Objectively [adjustment] is the degree to which the person has mastered the role requirements and is able to demonstrate that adjustment via his or her performance" (p. 278). Because adjustment may thus be conceived of as a meaningful on-assignment correlate of expatriate job performance, it is proposed here that all facets of adjustment will relate positively to expatriate job performance:

> Hypothesis 8(a-c): General adjustment (a), interaction adjustment (b), and work adjustment (c) will be positively related to expatriate job performance.

2.4 Exploratory meta-analyses on predictors of expatriate job performance

Quite a few other generalized domestic predictors and expatriate context-specific predictors have been investigated within the expatriate context. However, oftentimes, primary data for these predictors could not be aggregated due to a lack of studies examining the relationship at hand (i.e. $K<2$). Although we did not aspire to take a stand on variables that have seldom been investigated within the expatriate management context, all meta-analyses that could be conducted on such predictors are reported here in order to ensure a comprehensive review of the state of the art of predicting expatriate job performance. Variables for which such exploratory meta-analyses were conducted are: cultural flexibility, level of education, ego-strength, English language ability, fulltime work experience, intelligence, Meyers-Briggs Type Indicator (MBTI) introversion, number of previous assignments, peer nominations, relevant experience, selection board ratings, tolerance for ambiguity, ethnocentrism,

task leadership, people leadership, open-mindedness, tolerance, patience, social adaptability, interpersonal interest and locus of control.

2.5 Exploratory analyses on biographical/control variables

Finally, in order to examine the influence of a number of control/biographical variables on expatriate job performance exploratory meta-analyses were conducted on the following variables: gender, age, assignment tenure, individualism, masculinity, power distance, uncertainty avoidance, and cultural distance.

2.6 Method

Literature search

Several approaches to locating studies that had examined expatriate job performance were employed. The ABI-INFORM Archive Complete, ABI Inform Global, Dissertation Abstracts, PsychInfo, SSCI, Scirus, and Anne-Wil Harzing's (2002) Literature Databases were searched using multiple keywords. The Anne-Wil Harzing Literature Database (2002) is available online and contains thousands of literature references in the area of International Management/Business, Comparative and Cross-cultural Management. Keywords included all possible derivatives and combinations of the following terms: expatriate, international assignee, performance and effectiveness. Past and present conference programs of the Academy of Management and the Society for Industrial and Organizational Psychology were also examined for relevant studies. In order to prevent an overemphasis on U.S. studies, online search engines were also consulted using both country extensions (e.g., .cn for China) and alternative languages in addition to the (translated) keywords. "Snowballing" (i.e., the examination of references of articles for the identification of other relevant studies) was conducted on all identified studies. In addition, prominent authors within the field were contacted by e-mail and asked whether they knew of any published/unpublished studies on expatriate job performance. Finally, a request for validity data was placed on two relevant bulletin boards (i.e., the SIOP Bulletin Board and the International HR Digest), and 27 consulting companies that advertised expatriate selection services were contacted by e-mail with a request for validity data.

Inclusion criteria

Only those studies that had explicitly examined the prediction of expatriate job performance were included. No attempt was made to force related but not identical variables, such as work adjustment, into the performance domain. Only studies that focused on expatriates (as opposed to repatriates) were included.

Sixteen studies that had focused on the prediction of expatriate job performance were identified through literature searches employing keywords. Two of these (Caligiuri, 1996; Gelles, 1996) refer to unpublished works that could not be tracked down. Nonetheless, it emerged that all data reported in Caligiuri's (1996) dissertation had since been published (P. Caligiuri, personal communication, September 10, 2003) and had already been located.

Another 11 studies were identified through snowballing. An anonymous reviewer of an earlier version of this manuscript suggested three further studies (reported in Shaffer, Ferzandi, Harrison, Gregersen, & Black, 2003). Two final studies (Fernandez de Cueto, 2004; Robinson & Williams, 2003) were obtained through our search of conference programs. In total, 30 studies could be included.

Sample characteristics

Summary statistics for the 30 studies may be found in Table 1. The average response rate for the typical study was 42%. In addition, it is noteworthy that the typical study seems to employ American expatriates residing in Asia. Average tenure in the current country was approximately 26 months; while average total expatriate tenure appeared to be only 20 months higher (average standard deviations could not be estimated because these were seldom reported). It should be noted that these findings are rather inconclusive because only 6 of the 30 studies reported both average tenure in the current country and total expatriate tenure. With a mean percentage of 83%, males were highly overrepresented. This finding appears to be characteristic of the expatriate population in general (see Sinangil & Ones, 2003). On the basis of studies reporting on marital status, it appears that 81% of expatriates were married, although it is unclear what percentage of spouses actually joined the expatriates on assignment. The average expatriate was 40 years old (again a standard deviation could not be calculated). Finally, it is remarkable that only five studies included in this review employed longitudinal designs.

Categorization

The categorization of the predictor variables and correlates is depicted in Table 2. Categorizations of studies in which an analogous predictor content domain had a different variable name than that reported in the column headings of Table 2 and other considerations that pertained to the meta-analyses on a study-by-study level are described below. Information regarding the specific instruments used, insofar as these are mentioned in the primary studies, is available upon request from the first author.

Both Mischel (1965), and Guthrie and Zektick (1967) assessed manifest anxiety, the effects of which were mirrored and used within the emotional stability meta-analysis. Following Costa and McCrae's (1985) procedure, effects of Meyers-Briggs Type Indicator (MBTI) extraversion, MBTI feeling, MBTI judging, and MBTI intuiting from the study by Furnham and Stringfield (1993) were included in the extraversion, agreeableness, conscientiousness, and openness meta-analyses, respectively.

Effects of acculturation attitudes (Stierle, Van Dick, & Wagner, 2002), and intercultural sensitivity (Volmer & Staufenbiel, 2003) were aggregated in the cultural sensitivity meta-analysis. Sinangil and Ones (1997) report that "In [their] data general adjustment to living abroad and interaction adjustment were highly correlated and therefore not retained as separate variables." (p. 185). The effect of this aggregated measure was therefore included in the meta-analyses of both general and interaction adjustment. The interaction adjustment meta-analysis included an effect size of relationships with host nationals obtained from Feldman and Thomas (1992), an effect size of perceived effectiveness in the host community which was obtained from Guthrie and Zektick (1967), an effect size of quantity of contact with host nationals obtained from Stierle et al. (2002), and an effect size of interaction with local people obtained from Tucker et al. (2004). An effect for tolerance for uncertainty (Black & Porter, 1991) was labeled as tolerance for ambiguity.

Table 1. Summary statistics for studies included in this review[a]

	1	2	3	4	5	6	7	8	9	10	11	12	13
Author(s)	N(Resp.)[b]	Nation.	Location	AVTT(SD)	AVTE(SD)	Occ.	%Male	%Married	MAge	L	Ti	Pub	Loc.
Black & Porter (1991)	46 (32%)	US	HK	-	-	Man.	88	-	46 (-)	N	On	Y	Snow
Bolino & Feldman (2000)	268(33%)	80% US	Mixed	-	27(24.6)	Mixed	90	85	-	N	On	Y	Psych
Caligiuri (2000)	143 (51%)	81% US	25 C	21.6 (-)	-	85% Tech	83	75	40 (-)	N	On	Y	ABI
Caligiuri & Tung (1999)	98 (35%)	US	25 C	21.6 (-)	-	-	82	78	39 (-)	N	On	Y	Snow
Dalton & Wilson (2000)	61(-)	Arab	Arab	23 (14)	-	Man.	100	-	42 (-)	N	On/Post	Y	SSCI
Deller (2000)	83 (36%)	German	Korea	37.9 (-)	37.9 (-)	54% Man.	97	81	43 (-)	N	On	Y	Snow
Fernandez de Cueto (2004)	75(-)	Mixed	Dom.	-	31.2 (-)	-	75	-	38 (-)	N	On	N	SIOP
Feldman & Thomas (1992)	118(40%)	Mixed	Mixed	72 (-)	30(-)	Mixed	97	'Typically'	45 (-)	N	On	Y	ABI
Furnham & Stringfield (1993)	148 (-)	Euro	SEA	-	-	Man.	93	-	-	N	On	Y	SSCI
Grösch (2004)	202(-)	Mixed	Mixed	36 (-)	-	-	70	52	-	N	On	N	ABI
Gross (2002)	32 (26%)	US	Asia	10 (16)	12 (13)	Miss.	66	75	41(16)	N	On	N	Psych
Guthrie & Zektick (1967)	278 (-)	US	Ph.	24 (-)	-	PC Volunt	53	-	-	Y	Pre/On	Y	Snow

Table 1 (continued). Summary statistics for studies included in this review[a]

	1	2	3	4	5	6	7	8	9	10	11	12	13
Author(s)	N(Resp.)	Nation.	Location	AVTT(SD)	AVTE(SD)	Occ.	%Male	%Married	MAge	L	Timing	Pub	Loc.
Harrison & Shaffer (2001)	108 (13%)	Mixed	HK	-	-	Man.	87	84	45 (-)	N	On	N	Snow
Kraimer et al. (2001)	339 (58%)	US	Mixed	23 (-)	-	Man/Tech	98	100	44 (-)	N	On	Y	Psych
Leslie et al. (2002)	75 (-)	-	-	-	-	Man.	-	-	-	N	On	Y	Snow
Liu (2003)	101 (51%)	TW	-	-	-	Medical	-	-	-	N		N	Snow
Mischel (1965)	41(-)	US	Nigeria	-	-	PC Vol.	68	-	-	Y	Pre/On	Y	Snow
Parker & McEvoy (1993)	169 (63%)	62% US	44% Euro	-	-	-	57	65	36(-)	N	On	Y	Snow
Robinson & Williams (2003)	105 (35%)	Mixed	Mixed	-	15.6 (-)	-	89	68	37 (-)	N	On	N	SIOP
Schneider (1997)	90 (-)	Mixed	China	-	-	67% Man.	92	-	-	N	On	N	Psych
Shaffer et al. (2003) - Study 1	81 (15%)	Mixed	HK	84 (-)	3 (-)	-	87	85	45 (9)	N	On	N	Rev.
Shaffer et al. (2003) - Study 2	309 (31%)	Korean	Mixed	-	-	Man.	100	96	39 (5)	N	On	N	Rev.
Shaffer et al. (2003) - Study 3	71 (47%)	Japanese	Mixed	156 (-)	48 (-)	Man.	100	92	39 (9)	Y	Pre/On	N	Rev.
Sinangil & Ones (1997)	220 (49%)	Mixed	Turkey	-	37 (63)	Service	75	85	40(10)	N	On	Y	Snow

Table 1 (continued). Summary statistics for studies included in this review[a]

	1	2	3	4	5	6	7	8	9	10	11	12	13
Author(s)	N(Resp.)	Nation.	Location	AVTT(SD)	AVTE(SD)	Occ.	%Male	%Married	MAge	L	Timing	Pub	Loc.
Sinangil & Ones (2003)	220 (-)	Mixed	Turkey	-	37 (63)	Service	75	85	41(10)	N	On	Y	SSCI
Stierle et al. (2002)	126 (50%)	German	41 C	32 (-)	-	Mixed	96	89% steady	-	N	91%On	Y	SSCI
Tsang (2001)	107 (91%)	Chinese	Sing.	38 (28)	-	Academic	88	-	-	N	On	Y	SSCI
Tucker et al. (2004)	100(-)	US	25C	-	>10	Corp.	92	85	42 (-)	Y	Pre/On	Y	ABI
Volmer & Staufenbiel (2003)	66 (-)	German	US	66 (-)	5 (5)	Trainees	47	-	25 (2)	Y	Pre/On	N	Snow
Wang (2001)	166(42%)	Mixed	China	-	-	-	82	68	-	N	On	N	ABI

[a] Key to variable headings and value labels

1 = sample size (response rate)

2 = Expatriate nationality: US = United States; Euro = European; TW = Taiwan

3 = Host country: C = countries; DOM = Dominican Republic; HK = Hong Kong; Ph. = Philippines; PR = Pacific Rim countries;SEA = Southeast Asia; Sing = Singapore; TW = Taiwan

4 = Average Total Tenure in months (SD in Months)

5 = Average Expatriate Tenure in months (SD in months)

6 = Occupation: Man = Managerial; Tech = Technical; PC Vol. = Peace Corps Volunteer; Miss. = Missionary; Corp = Corporate

7 = Percentage of males in the sample

8=Percentage of married expatriates in the sample

9 = Mean age in years (SD in years)

10 = Longitudinal: Y = Yes; N = No

11 = Measurement timing: Pre = prior to expatriation; On = On assignment; Post = After assignment

12 = Published: Y = Yes; N = No

13 = Location Method: ABI = ABI Inform; Psych = PsychInfo; Rev. = Suggested by anonymous reviewer; Snow = Snowballing; SIOP = SIOP

[b] N's reflect subsets of the original sample in cases where criterion data were only available for that subset

Table 2. Sources of effect sizes used per predictor for the meta-analyses on expatriate job performance[1]

	Big Five Dimensions					Context Specific Predictors				Adjust-ment			Explorative analyses for predictors with k<4																				Biographical / control variables							
Study	Extraversion	Emotional Stability	Agreeableness	Conscientiousness	Openness	Local Language Ability	Cultural Sensitivity	Prior International Experience	Flexibility	General Adjustment	Interaction Adjustment	Work Adjustment	Cultural Flexibility	Level of Education	Ego Strength	English Language Ability	Fulltime Work Experience	Intelligence	MBTI Introversion	Number of Previous Assignments	Peer Nominations	Relevant Experience	Selection Board	Tolerance for Ambiguity	Ethnocentrism	Task Leadership	People Leadership	Openmindedness	Tolerance	Patience	Social Adaptability	Interpersonal Interest	Locus of Control	Gender	Age	Assignment Tenure	Individualism	Masculinity	Power Distance	Uncertainty Avoidance	Cultural Distance
K	12	12	11	11	11	5	4	6	5	9	12	6	2	2	2	2	2	2	2	2	2	2	2	2	3	2	2	2	2	2	2	2	5	3	6	2	2	2	2	4
Black & Porter (1991)																								✓																
Bolino & Feldman (2000)																																			✓					✓
Caligiuri (2000)	✓	✓	✓	✓	✓																																			
Caligiuri & Tung (1999)										✓																							✓			✓	✓	✓	✓	
Dalton & Wilson (2000)	✓	✓	✓	✓	✓																														✓					
Deller (2000)	✓	✓	✓	✓	✓				✓									✓						✓					✓											

Table 2 (continued). Sources of effect sizes used per predictor for the meta-analyses on expatriate job performance

Study	Extraversion	Emotional Stability	Agreeableness	Conscientiousness	Openness	Local Language Ability	Cultural Sensitivity	Prior International Experience	Flexibility	General Adjustment	Interaction Adjustment	Work Adjustment	Cultural Flexibility	Level of Education	Ego Strength	English Language Ability	Fulltime Work Experience	Intelligence	MBTI Introversion	Number of Previous Assignments	Peer Nominations	Relevant Experience	Selection Board	Tolerance for Ambiguity	Ethnocentrism	Task Leadership	People Leadership	Openmindedness	Tolerance	Patience	Social Adaptability	Interpersonal Interest	Locus of Control	Gender	Age	Assignment Tenure	Individualism	Masculinity	Power Distance	Uncertainty Avoidance	Cultural Distance
Feldman & Thomas (1992)											✓																														
Fernandez de Cueto (2004)	✓	✓	✓	✓	✓		✓		✓																															
Furnham & Stringfield (1993)	✓		✓	✓	✓														✓																					
Grösch (2004)	✓	✓	✓	✓	✓			✓																																
Gross (2002)	✓	✓	✓	✓	✓																																			
Guthrie & Zektick (1967)		✓				✓					✓				✓	✓					✓		✓																		
Harrison & Shaffer (2001)										✓	✓	✓																													
Kraimer et al. (2001)						✓				✓	✓	✓																							✓						✓

Table 2 (continued). Sources of effect sizes used per predictor for the meta-analyses on expatriate job performance

Study	Extraversion	Emotional Stability	Agreeableness	Conscientiousness	Openness	Local Language Ability	Cultural Sensitivity	Prior International Experience	Flexibility	General Adjustment	Interaction Adjustment	Work Adjustment	Cultural Flexibility	Level of Education	Ego Strength	English Language Ability	Fulltime Work Experience	Intelligence	MBTI Introversion	Number of Previous Assignments	Peer Nominations	Relevant Experience	Selection Board	Tolerance for Ambiguity	Ethnocentrism	Task Leadership	People Leadership	Openmindedness	Tolerance	Patience	Social Adaptability	Interpersonal Interest	Locus of Control	Gender	Age	Assignment Tenure	Individualism	Masculinity	Power Distance	Uncertainty Avoidance	Cultural Distance
Leslie et al. (2002)	✓	✓	✓	✓	✓																																				
Liu (2003)										✓	✓	✓		✓																											
Mischel (1965)		✓													✓			✓			✓		✓																		
Parker & McEvoy (1993)								✓		✓	✓	✓							✓			✓											✓	✓						✓
Robinson & Williams (2003)	✓	✓	✓	✓	✓																																			
Schneider (1997)						✓	✓	✓	✓					✓		✓	✓			✓		✓						✓		✓		✓		✓		✓	✓	✓	✓	✓	
Shaffer et al.(2003) - Study 1	✓	✓	✓	✓	✓																																			
Shaffer et al.(2003) - Study 2										✓	✓	✓	✓												✓	✓	✓													

Table 2 (continued). Sources of effect sizes used per predictor for the meta-analyses on expatriate job performance

Study	Extraversion	Emotional Stability	Agreeableness	Conscientiousness	Openness	Local Language Ability	Cultural Sensitivity	Prior International Experience	Flexibility	General Adjustment	Interaction Adjustment	Work Adjustment	Cultural Flexibility	Level of Education	Ego Strength	English Language Ability	Fulltime Work Experience	Intelligence	MBTI Introversion	Number of Previous Assignments	Peer Nominations	Relevant Experience	Selection Board	Tolerance for Ambiguity	Ethnocentrism	Task Leadership	People Leadership	Openmindedness	Tolerance	Patience	Social Adaptability	Interpersonal Interest	Locus of Control	Gender	Age	Assignment Tenure	Individualism	Masculinity	Power Distance	Uncertainty Avoidance	Cultural Distance
Shaffer et al.(2003) - Study 3										✓		✓	✓												✓	✓	✓														
Sinangil & Ones (1997)								✓		✓	✓						✓			✓					✓										✓	✓					
Sinangil & Ones (2003)											✓																						✓								
Stierle et al. (2002)	✓	✓	✓	✓	✓		✓				✓																														
Tsang (2001)	✓					✓		✓		✓	✓																														
Tucker et al. (2004)									✓		✓																	✓	✓	✓	✓	✓	✓								
Volmer & Staufenbiel (2003)						✓	✓		✓																						✓										
Wang (2001)								✓																									✓	✓		✓					✓

[1] Checkmarks denote that coefficients for the variable in a particular collumn were obtained from the study identified on the specified row

K = Total number of effect sizes included for each variable

Of the 30 studies, eight (Furnham & Stringfield, 1993; Kraimer, Wayne, & Jaworski, 2001; Liu, 2003; Shaffer et al., 2003 - 3 studies; Sinangil & Ones, 1997, 2003) had employed multidimensional operationalizations of expatriate job performance. This seems to be in accordance with the current state of affairs in domestic personnel selection research and with Motowidlo and Schmitt (1999), who posit that the performance domain is behaviorally multidimensional. However, the fact that *different* multidimensional operationalizations were used, posed some problems for aggregation. Fortunately, three of these eight studies (Furnham & Stringfield, 1993; Sinangil & Ones, 1997, 2003) also reported correlations of predictors with an aggregated or overall performance measure. For the first study reported in Shaffer et al. (2003) these could be obtained (M. A. Shaffer, personal Communication, March 15, 2004). For the four other studies, effects on the different performance dimensions (e.g., contextual and task performance) were averaged, since entering both correlations would entail a violation of the independence assumption (Hunter & Schmidt, 1990).

Of the 30 studies, all but eleven (i.e., Black & Porter, 1991; Gross, 2002; Liu, 2003; Parker & McEvoy, 1993; Robinson & Williams, 2003; Shaffer et al., 2003 - study 2 and 3; Tsang, 2001; Tucker et al., 2004) had avoided potential common method variance by obtaining performance ratings from the supervisor or coworker rather than relying on self-rated performance. Both Deller (2000), and Stierle, Van Dick, and Wagner (2002) only had supervisory performance ratings (vs. self-ratings) available for a fraction (28% and 47% respectively) of their samples. Therefore, effects of self-rated predictors on self-rated performance were entered into the initial meta-analyses for these thirteen studies. Although Stierle et al., (2002) did not discuss the actual supervisor-rated criterion-related validity estimates, they report a medium correlation between self- and supervisor-rated performance ($r = .41$, $p < .01$, $n = 126$).

In the case of the first study reported by Shaffer et al., (2003), several options were available, as performance was rated by expatriates themselves and their colleagues, and the Big Five were rated by their spouses and their colleagues. The effects for spouse-rated personality and self-rated performance were entered into the initial meta-analyses for this study, since this avoided common method variance and yielded the highest sample size. Effects for spouse-rated personality on colleague-rated job performance were entered into the other-rated performance moderator

analyses for the Big Five (data obtained from M.A. Shaffer, personal communication, March 15, 2004).

In addition to host country manager performance ratings, the study by Dalton and Wilson (2000) also included performance ratings from the home country supervisor. Both agreeableness (r = .48, p < .05, n = 22) and conscientiousness (r = .49, p < .05, n = 22) related significantly to home country supervisor ratings of job performance, but no significant relationships were found between the various Big Five dimensions and host country-rated job performance. However, since it was felt that host country ratings would more accurately reflect the expatriates' job performance it was decided to obtain the host country ratings (M. Dalton, personal communication, July 23, 2003). Data in the form of 360-degree performance evaluations were available for two studies (Guthrie & Zektick, 1967; Schneider, 1997). In a very early appearance of 360-degree evaluations, Guthrie and Zektick aggregated their one-item performance measure across at least three ratings per subject. Ratings in Schneider's (1997) study were supplied by the expatriate him or herself (n = 76), managers inside the host country (n = 30), managers outside the host country (n = 9), subordinates (n = 74), peers (n = 90), and customers (n = 38). Interestingly, correlations between self-rated job performance and the performances as rated by the managers in the host country (r = -.14) and the host country subordinates (r = -.17) were negative, albeit not significant. Unfortunately, the author did not explore this issue further, because the purpose was "…not to examine the difference in ratings across various rater populations." (Schneider, 1997, p. 61). Instead, these scores were simply averaged to form a composite performance evaluation.

In case of unreported reliabilities, authors were first contacted to see whether these could be obtained. In cases where no reply was received, it was examined whether the reliability for the scale in question could be obtained from a manual. The reliabilities for which this was not possible were estimated by averaging the reliabilities of the identical variables from the other studies.

Analyses

According to Rothstein, McDaniel, and Borenstein (2002) "random effects models are appropriate whenever there is reason to suspect that the studies are truly heterogeneous, that is they are not drawn from a single population" (p. 543). Because there was quite some diversity (e.g., in host county, expatriate nationality, and

occupations) between the samples from which our data were drawn, a random effects model was thus decided upon.

Correlations from the 30 primary studies were analyzed using Schwarzer's Statistics Software for Meta-Analysis 5.3 (Schwarzer, 1989b). Although the program provides output on the basis of the procedures developed by both Hunter, Schmidt, and Jackson (1982) and Hedges and Olkin (1985), only the output based on the procedures developed by the former was used for the purposes of the present investigation (i.e., data were not transformed using Fisher's *Z*-transformation). This was decided because when sample sizes are greater than 20, the positive bias in Fisher *Z*-transformations outpaces the negative bias in averaging raw correlations (Hunter & Schmidt, 1990). The Schmidt and Hunter (1977) method was employed to correct for artifacts.

In addition it should be noted that instead of using the confidence intervals from the output file, these were calculated on the basis of formulae provided by Whitener (1990) which were expected to yield a more accurate estimate and had the added advantage of allowing the calculation of confidence intervals for heterogeneous cases.

In line with the optimal sequence for decisions and calculations to be made in meta-analysis delineated by Whitener (1990), first the credibility intervals and in particular their residual standard deviation terms, were examined in order to detect the presence of moderators. The difference between the confidence and the credibility interval is that the first is centered around the sample-size weighted mean effects sizes, while the latter is centered around the estimated true-score correlations (see also Barrick & Mount, 1991; Whitener, 1990). As a decision rule, homogeneity was ascertained when the residual standard deviation ($SD\rho$) was smaller than 25% of the corrected population effect size (ρ) (see Schwarzer, 1989a; Stoffelmayr, Dillavou, & Hunter, 1983).

Upon conducting the different meta-analyses, it appeared that quite a few of the residual standard deviations could not be calculated because residual variances for some relationships were estimated to be negative, which caused the residual standard deviation to be undefined (i.e. the square root of a negative number). Although this was likely the result of an inflated sampling error due to the relatively small number of studies included in those analyses, we followed Schwarzer's (1989a)

recommendation, who in discussing the Schmidt-Hunter method states that these should be interpreted as being equal to zero.

The second step in Whitener's (1990) optimal sequence is to calculate the confidence intervals so that the accuracy of the estimate of the mean effect size may be approximated. The 95% confidence interval for homogeneous results was calculated using a formula which was derived from a formula for calculating the standard error reported by Whitener (1990, p. 316) and in case of heterogeneous results, 95% confidence intervals were calculated using a formula which was constructed on the basis of the formula for calculating the standard error for heterogeneous studies reported by Whitener (1990, p. 317). She states that in case of heterogeneous results such intervals may "be generated around the mean of the subpopulations using the standard error for the heterogeneous case" (p. 317). Significant effects of a predictor on expatriate performance were concluded only in those cases where the (homo- or heterogeneous) confidence intervals excluded zero.

Additional information regarding the analyses used to investigate hypothesis 2(a-e) concerning the equivalence of domestic and expatriate validities of the Big Five, and 3(a-e) concerning rating source (self vs. other) as a moderator of Big Five validities is provided below.

To investigate hypothesis 2(a-e), the following procedures were followed. Due to an emphasis on their search for moderators, none of the domestic meta-analyses reported 95% confidence intervals. Therefore, these were computed on the basis of the two formulae for calculating sampling error (for the homogeneous and heterogeneous case), which were obtained from Whitener (1990). The decision rule for ascertaining homogeneity was first applied to the Big Five data reported within the different meta-analyses. Subsequently the corresponding (heterogeneous or homogeneous) 95% confidence interval was calculated. Unfortunately both Barrick and Mount (1991) and Tae and Byung (2002) did not report residual standard deviations for the sample-weighted mean. Therefore, the confidence intervals for their heterogeneous effects could not be estimated.

As a test for the equality of the Big Five validities across the four domestic meta-analyses and the meta-analytic data reported in this chapter, a formula for testing the equality of any number of independent correlations obtained from Brannick (2004) was employed. Only when this calculation resulted in a significant finding, indicating that not all of the meta-analytic correlations entered into the

equation were equal, further analyses were conducted using the formula for testing the equality of two independent correlations which was also obtained from Brannick (2004).

The moderator analyses that needed to be conducted to investigate hypothesis 3(a-e) concerning the Big Five predictive validities for self- vs. other-rated performance, were conducted by splitting the original primary data files of Big Five validities into self- and other-rated performance subsets. In order to establish the presence of a moderator it was examined whether the homo- or heterogeneous confidence intervals showed any overlap. In case there was no overlap, it was concluded that the effect was moderated. Having discussed some of the particularities of the analyses that were conducted, the results for the various meta-analyses are presented below.

2.7 Results

Meta-Analytic and Quantitative Review of Expatriate Job Performance Correlates

Results of the various meta-analyses are presented in Table 3. Column two through seven respectively contain the total sample size, *K* (i.e., the number of correlation coefficients) on which each analysis was based, the observed population effect size (sample weighted mean *r*), the estimated true population effect size after correction for attenuation (ρ), the estimated true residual standard deviation ($SD\rho$), the lower bound of the 95% confidence interval, the lower bound of the 95% credibility interval, and the results for the employed decision rule for homogeneity ($SD\rho < ¼\rho$). In those cases where the data were homogeneous (indicated by 'yes' in column 7), a homogeneous confidence interval was calculated and vice versa.

The Big Five Factors as Predictors of Expatriate Job Performance

Hypothesis 1a-1e stated that the Big Five personality dimensions would relate positively to expatriate job performance. As may be observed from Table 3, the heterogeneous confidence intervals for extraversion, emotional stability, and agreeableness, and the homogeneous confidence interval for conscientiousness excluded zero. Support was therefore found for the hypothesized relationships with

Table 3. Meta-Analytic Results for the Effects on Expatriate Job Performance

	Total *N*	*K*	Sample weighted mean *r*	ρ	*SD*ρ	95% Confidence interval lower	95% Credibility interval lower	*SD*ρ < ¼ρ
Big Five Dimensions								
Extraversion	1114	12	.14	.17	.07	.08	.04	No
Emotional Stability	1189	12	.09	.10	.10	.01	-.10	No
Agreeableness	1021	11	.09	.11	.09	.02	-.06	No
Conscientiousness[1]	1023	11	.14	.17	.00	.08	.17	Yes
Openness	1023	11	.05	.06	.11	-.03	-.15	No
Moderator Analyses (by performance rater)								
Extraversion (Self)[1]	586	6	.15	.20	.00	.07	.20	Yes
Extraversion (Other)	621	8	.16	.18	.11	.05	-.04	No
Emotional Stability (Self)	497	5	.05	.06	.18	-.10	-.28	No
Emotional Stability (Other)[1]	786	9	.12	.13	.00	.05	.13	Yes
Agreeableness (Self)[1]	494	5	.18	.23	.00	.10	.23	Yes
Agreeableness (Other)	621	8	.12	.14	.06	-.04	-.34	No
Conscientiousness (Self)[1]	496	5	.12	.14	.00	.03	.14	Yes
Conscientiousness (Other)[1]	621	8	.17	.21	.00	.10	.21	Yes
Openness (Self)	496	5	.04	.05	.07	-.06	-.09	No
Openness (Other)	621	8	.11	.13	.26	-.06	-.38	No

Table 3 (continued). Meta-Analytic Results for the Effects on Expatriate Job Performance

	Total *N*	*K*	Sample weighted mean *r*	*ρ*	*SDρ*	95% Confidence interval lower	95% Credibility interval lower	*SDρ* < ¼*ρ*
Context Specific Predictors								
Local Language Ability	496	5	.15	.19	.12	.03	-.05	No
Cultural Sensitivity[1]	339	4	.24	.29	.00	.13	.29	Yes
Prior International Experience	938	6	.02	.02	.20	-.08	-.38	No
Flexibility[1]	345	5	.08	.09	.00	-.03	.09	Yes
Adjustment								
General Adjustment	1373	9	.14	.18	.14	.06	-.09	No
Interaction Adjustment	1897	12	.24	.30	.05	.20	.21	Yes
Work Adjustment	964	6	.27	.34	.06	.21	.22	Yes

Table 3 (continued). Meta-Analytic Results for the Effects on Expatriate Job Performance

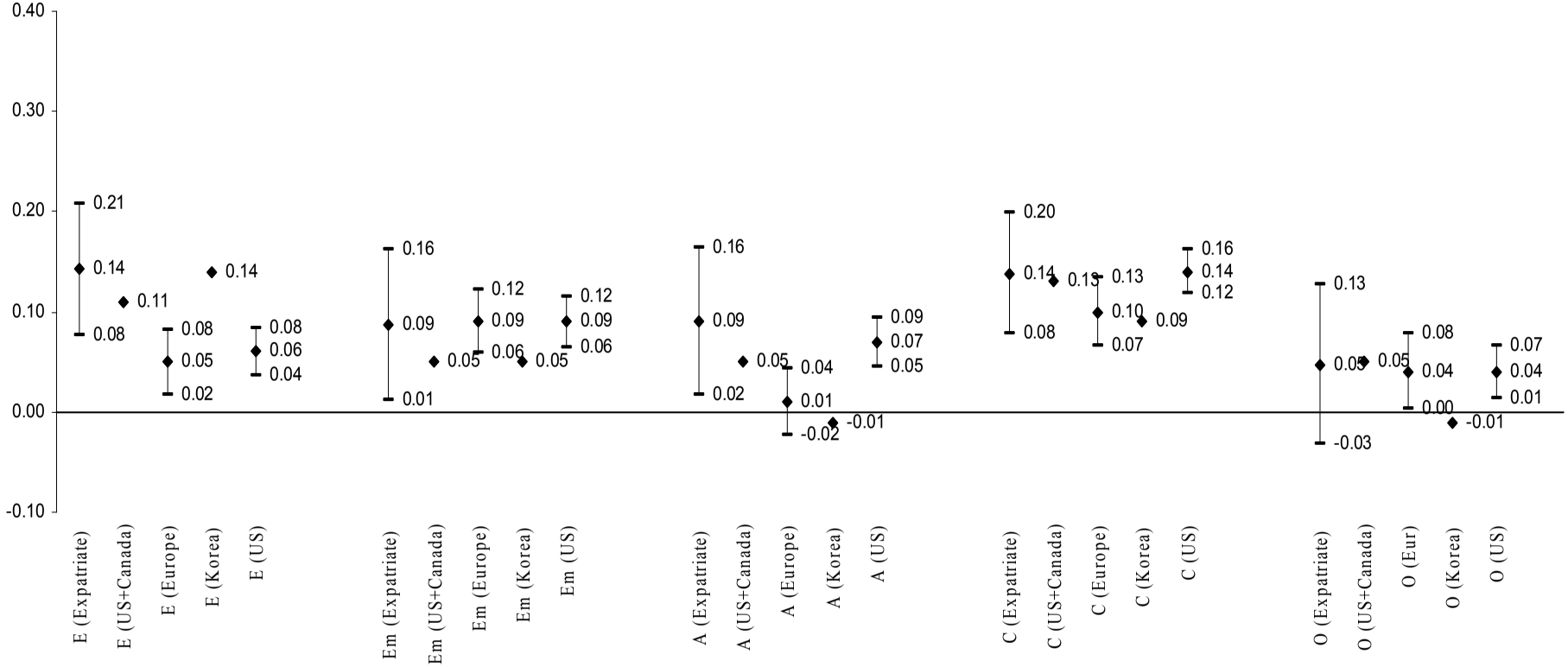
	Total N	*K*	Sample weighted mean r	ρ	SDρ	95% Confidence interval lower	95% Credibility interval lower	*SDρ* < ¼*ρ*
Explorative Analyses for Predictors with K<4								
Cultural Flexibility[1]	380	2	.21	.25	.00	.11	.25	Yes
Level of Education[1]	191	2	.12	.13	.00	-.02	.13	Yes
Ego Strength[1]	313	2	.20	.24	.00	.09	.24	Yes
English Language Ability	368	2	.10	.11	.13	-.10	.15	No
Fulltime Work Experience[1]	310	2	.09	.09	.00	-.02	.09	Yes
Intelligence[1]	76	2	.12	.12	.00	-.10	.12	Yes
MBTI Introversion[1]	204	2	-.10	-.11	.00	-.24	-.11	Yes
Number of Previous Assignments[1]	310	2	.06	.06	.00	-.05	.06	Yes
Peer Nominations[1]	319	2	.19	.23	.00	.09	.23	Yes
Relevant Experience[1]	259	2	.09	.09	.00	-.03	.09	Yes
Selection Board[1]	319	2	.34	.41	.00	.24	.41	Yes
Tolerance for Ambiguity[1]	122	2	.27	.35	.00	.11	.35	Yes
Ethnocentrism	600	3	-.15	-.20	.06	-.23	-.32	No
Task Leadership[1]	380	2	.11	.13	.00	.01	.13	Yes
People Leadership	380	2	.18	.22	.12	.01	-.01	No

Table 3 (continued). Meta-Analytic Results for the Effects on Expatriate Job Performance

	Total N	*K*	Sample weighted mean r	ρ	SDρ	95% Confidence interval lower	95% Credibility interval lower	*SDρ* < ¼*ρ*
Openmindedness[1]	190	2	.06	.74	.00	-.09	.07	Yes
Tolerance[1]	135	2	-.02	-.03	.00	-.19	-.03	Yes
Patience[1]	190	2	.12	.16	.00	-.02	.16	Yes
Social Adaptability[1]	166	2	.24	.30	.00	.10	.30	Yes
Interpersonal Interest[1]	190	2	.20	.27	.00	.06	.27	Yes
Locus of Control	266	2	-.09	-.11	.17	-.31	-.45	No
Biographic/Control variables								
Gender[1]	690	5	-.04	-.05	.00	-.12	-.05	Yes
Age[1]	490	3	.04	.05	.00	-.05	.05	Yes
Assignment Tenure	1170	6	.09	.09	.08	.01	-.05	No
Individualism	162	2	.06	.06	.03	-.10	.00	No
Masculinity[1]	162	2	.00	.00	.00	-.15	.00	Yes
Power Distance[1]	162	2	-.11	-.11	.00	-.26	-.11	Yes
Uncertainty Avoidance[1]	162	2	.02	.02	.00	-.13	.02	Yes
Cultural Distance	816	4	.07	.08	.18	-.10	-.28	No

[1] These credibility intervals were based on a residual standard deviation of zero (the residual variance estimate for these cases was negative).

Figure 1. Comparison of the 95% confidence intervals for the Big Five -performance relationships for expatriates and domestic employees within various countries.



Note. E = Extraversion, Em = Emotional Stability, C = Conscientiousness, A = Agreeableness, O = Openness. Expatriate data obtained from the present study; domestic data from US and Canada from Barrick and Mount (1991); domestic data from Europe from Salgado (1997); domestic data from Korea from Tae and Byung (2002); and domestic data from the US from Hurtz and Donovan (2000).

job performance of extraversion (1a), emotional stability (1b), agreeableness (1c), and conscientiousness (1d), although the effects of extraversion, emotional stability, and agreeableness appear to be moderated. No support was found for the relationship of openness (1e) with expatriate job performance. Since this effect was also moderated, it might well be that more positive findings for a certain subset may emerge in future studies. It should also be noted that all of the effect sizes were small, although not smaller than those typically found within domestic contexts, as will be demonstrated below.

To test hypothesis 2a-2e (concerning the equivalence of domestic and expatriate Big Five validities), the sample-size weighted mean uncorrected correlations and associated 95% confidence intervals that were found within the present study were compared with those found within culturally diverse contexts (see Figure 1). Of the available domestic meta-analyses that had examined the relationship between the Big Five dimensions and job performance, the meta-analysis by Tett et al. (1991) was excluded because apparently some serious errors were made in its analyses (Ones, Mount, Barrick, & Hunter, 1994). Although Hurtz and Donovan (2000) focused exclusively on US studies, Barrick and Mount (1991) also included Canadian studies in their meta-analysis. In addition, Salgado focused exclusively on European studies while Tae and Byung (2002) included only Korean studies. Since Barrick and Mount (1991) did not report an *N* and a *K* for their mean (across populations) estimates, data from their managerial subsample were used for these analyses.

As may be observed from Figure 1, all of the sample-size weighted mean uncorrected correlations employing expatriate samples were equal to or higher than the sample-size weighted mean uncorrected correlations found within domestic studies. The largest difference between these correlations amounted .10 (for the comparison of our effect for agreeableness with that of Tae and Byung (2002). In order to test the equivalence of the Big Five validities across the different meta-analyses, a Q-statistic was calculated for each of the dimensions and compared to a chi-square value with k-1 degrees of freedom and p = .05 (see Table 4).

For all of the Big Five dimensions (i.e., extraversion, emotional stability, agreeableness, conscientiousness and openness), the (null)hypothesis, that all (domestic and expatriate) meta-analytic sample-size weighted mean uncorrected

correlations were equal, had to be rejected (see Table 4). Therefore, pair-wise analyses for our effects with all of the other effects were conducted (see Table 4). It was found that the expatriate sample-size weighted mean uncorrected correlation of extraversion was significantly higher than the domestic validities for extraversion that were reported by Hurtz and Donovan (2000) and Salgado (1997). No differences were found between the expatriate validity for emotional stability and the validities for emotional stability that were reported in the domestic meta-analyses. With regards to agreeableness, it was found that the expatriate mean uncorrected correlation was significantly higher than those reported for agreeableness by Salgado (1997) and Tae and Byung (2002). No differences between the expatriate validity of conscientiousness and the domestic validities for conscientiousness were found. For openness, finally, it was found that the expatriate mean uncorrected correlation was only significantly higher than the mean uncorrected correlations for openness that was reported by Tae and Byung (2002). Based on the confidence intervals shown in Figure 1 and these analyses it appears that personality is at least as predictive of expatriate job performance as it is of domestic job performance. Thus, although the effect sizes are small, they are comparable to the effect sizes found in domestic meta-analyses.

In order to investigate hypothesis 3(a-e), it was examined whether the confidence intervals for each of the Big Five dimension subsets (self- vs. other-rated performance) showed any overlap (see Table 3). In case rater type (self versus other) had been the one and only moderator at work, one would expect these analyses to result in homogeneous confidence intervals. However, only the self and other rater performance subsets for conscientiousness were both homogeneous and none of the homo- or heterogeneous confidence intervals were non-overlapping. Hypothesis 3(a-e) regarding moderation of performance rater type (self vs. other) on Big Five validities were therefore not supported within the present investigation.

Expatriate Context-Specific Variables as Predictors of Expatriate Job Performance

The results for the relationship between local language ability and expatriate job performance (Hypothesis 4) are also presented in Table 3. The uncorrected and corrected correlations between language ability and expatriate job performance were small and in the hypothesized direction. In addition, the lower bound of the (heterogeneous) 95% confidence interval excluded zero. This finding supports the

Table 4. Analyses concerning the equivalance of big five sample weighted mean correlations with job performance across meta-analyses

	Analyses on all sample weighted means				Pairwise analyses with expatriate sample weighted means							
					Barrick and Mount (1990)		Hurtz and Donovan (2000)		Salgado (1997)		Tae and Byung (2002)	
	df	*χ2*	*N*	*p*	*Z*	*p*	*Z*	*p*	*Z*	*p*	*Z*	*p*
Big Five Dimensions												
Extraversion	4	34.26**	29362	.00	1.06	.15	2.57**	.01	2.74**	.00	.08	.47
Emotional Stability	4	10.46*	27715	.03	1.22	.11	-.09	.46	-.09	.46	1.18	.12
Agreeableness	4	28.61**	26185	.00	1.21	.11	.60	.27	2.25**	.01	2.98**	.00
Conscientiousness	4	12.18*	29113	.02	.25	.40	-.06	.47	1.07	.14	1.44	.07
Openness	4	14.81**	23535	.01	-.08	.47	.21	.42	.20	.42	1.70*	.04

*Note. *p<.05. **p<.01*

hypothesis that local language ability is predictive of expatriate job performance. However, more research may be needed on the moderators of this relationship.

Of all the hypothesized relationships between selection context predictors and expatriate job performance, the effect for cultural sensitivity on expatriate job performance (Hypothesis 5) was strongest (r = .24) as may be observed from Table 3. The homogeneous 95% confidence interval for this effect excluded zero. Although this effect was still only moderate, it supports the hypothesis that cultural sensitivity is related to expatriate job performance.

Hypothesis 6, which stated that prior international experience would relate positively to expatriate job performance, was not supported. That is, the heterogeneous confidence interval for this effect included zero. Judging from the rather extreme breadth of the credibility interval and the ratio of the residual standard deviation to the corrected population effect size, moderators are clearly implicated.

It was found that the (homogeneous) confidence interval for flexibility included zero, which led us to conclude that hypothesis 7, stating that flexibility would relate positively to expatriate job performance was not supported. A possible explanation for this finding could be sought in the generality of the flexibility construct. Findings regarding cultural flexibility appear much more promising (see below in the exploratory analyses section).

Adjustment as an On-Assignment Correlate of Expatriate Job Performance

Results of the meta-analyses of the relationships between the three types of adjustment (general, interaction and work adjustment) and expatriate job performance (Hypothesis 8a-c) are also presented in Table 3.

The heterogeneous confidence interval for general adjustment and the homogeneous confidence intervals for interaction and work adjustment all excluded zero, which supports the hypothesis regarding the relationship of these facets with expatriate job performance (8a, 8b, and 8c). It should be noted, though, that the effects (r = .14, r = .24, r = .27, respectively) were only small to moderate in size. In addition, more research may be needed to find the moderators for the relationships between general adjustment and expatriate job performance.

Exploratory Analyses on Predictors of Expatriate Job Performance

Meta-analyses were also carried out on effects for which less than four effect sizes were available. Although the results for these analyses are less robust than the results for the meta-analyses with a higher *K*, they are more robust than the effects reported in the single studies that comprise them.

The homogeneous confidence intervals for cultural flexibility, ego strength, peer nominations, selection board ratings, tolerance for ambiguity, task leadership, social adaptability, and interpersonal interest, and the heterogeneous confidence intervals for ethnocentrism and people leadership all excluded zero. These variables therefore hold promise as predictors of expatriate job performance, although the actual effect sizes were small in most instances. As may be observed from Table 3, the relationships between English language ability, ethnocentrism, people leadership and locus of control with expatriate job performance were moderated. Interestingly, it appears that peers are to some extent able to distinguish between who will and who will not succeed on international assignments.

No effects were found for the relationships between expatriate job performance and level of education, English language ability, fulltime work experience, intelligence, MBTI introversion, number of previous assignments, relevant experience, open-mindedness, tolerance, patience and locus of control. It seems that these variables are less useful within the expatriate selection context.

Exploratory analyses on biographical/control variables

Although some of the studies reported correlates of expatriate job performance that may not be very practical for selection purposes, such as cultural distance and gender (see Caligiuri & Tung, 1999), estimates of the effects of these variables on expatriate job performance were included because of their significance as potential moderators in future research. Although the effect is small, it appears from its heterogeneous confidence interval that assignment tenure is somewhat predictive of expatriate job performance, with expatriates who have been on assignment for a longer period of time outperforming the new arrivals.

The heterogeneous confidence intervals for cultural distance and individualism and the homogeneous confidence intervals for the remaining biographic/control variables all included zero and it was thus concluded that none of these variables had

a significant relationship with expatriate job performance. Cultural distance, operationalized either through a computation on Hofstede's (1980) dimensions (individualism, masculinity, power distance, and uncertainty avoidance) or measured through a self-report scale, does not seem to affect expatriate performance. The same may be said for the effects of age and gender. On the basis of these results, future research, in our view, does not need to be especially concerned with controlling for these latter variables, although assignment tenure should be considered when conducting research on expatriates.

2.8 Discussion

In this section we start with a general overview of the state of affairs in the prediction of expatriate job performance on the basis of the findings of this study. Subsequently a tentative profile of the ideal overseas type will be presented. In addition, limitations of our study will be discussed including their reflections of the limitations of the primary studies we were able to obtain. Finally, some promising research directions will be pointed out.

One of the important findings from these meta-analyses is that the domestic relationships of the Big Five personality factors and job performance were clearly reproduced in the expatriate realm (Hypotheses 1a-e). Indeed, based on a comparison of meta-analytic findings from studies conducted in several parts around the world (Hypothesis 2a-e), it appears that personality is as, if not more predictive of expatriate job performance than it is of domestic job performance. Although hypothesized to be positive (Hypothesis 1e), the apparent non-existence of a relationship between openness and expatriate job performance corresponds with domestic findings. Within the expatriate context, it thus seems that extraversion, emotional stability, agreeableness and conscientiousness contribute to successful job performance: being assertive, stable, dutiful, and not shy, easily worried or nervous seem to be indicators of success in the foreign assignment. It is noteworthy that the counterhypothetical findings for openness are diametrically opposed to the common thought within the expatriate management literature (e.g., Caligiuri, Hyland, Joshi, & Bross, 1998; Jordan & Cartwright, 1998) that being open to new and unknown experiences are important attributes of the successful expatriate. Interestingly the (near) equivalence

of domestic and expatriate (non)findings regarding openness does provide additional support for the notion that domestic predictive validities generalize to the expatriate context.

No support was found for any moderation effects of criterion rater type (self- vs. other) on expatriate Big Five validities (Hypothesis 3a-e). Although this finding is rather tentative due to the relatively small number of studies that could be included, it appears that expatriates are not prone to a defensiveness that would lead them to inflate their self-rated performance. This finding may provide some comfort to expatriate researchers who can only obtain self-ratings of both the predictor and the criterion. However, another explanation of this finding could be that an inflation in validity due to common method variance (i.e., both the predictor and the criterion are rated by the expatriate), is cancelled out by a deflation due to the range restriction that results from defensiveness. It should be noted, that in relation to the overall big-five meta-analyses, a larger percentage of the self- and other- performance rating subsets yielded homogeneous results. Taken together with the fact that differences (albeit not significant) between the self- vs. other- subsets were in the expected direction for emotional stability, conscientiousness, and openness, it could well be that the power of these moderator analyses was too small to detect the presence of moderators. More research is clearly needed on this issue before firm conclusions can be drawn.

Of the expatriate context-specific predictors that were examined, cultural sensitivity (Hypothesis 5) in particular showed a relatively strong and positive relationship with job performance (r = .24). In addition, local language ability (Hypothesis 4) also seems to be predictive of expatriate job performance. Previous international experience (Hypothesis 6) and broad bandwidth flexibility (as opposed to cultural flexibility) on the other hand do not seem to be predictive (Hypothesis 7).

All of the relationships of the facets of adjustment with expatriate job performance (Hypotheses 8a-c) were in the expected positive direction. The findings reported within this meta-analysis seem to corroborate earlier meta-analytic findings regarding the relationship between the adjustment facets and expatriate job performance. With regard to general, interaction, and work adjustment Bhaskar-Shrinavas (2005) found uncorrected correlations of r = .15, r = .15, and r = .31 while Hechanova et al., (2003) found uncorrected correlations of r =.13, r = .17 en r = .40 respectively. It should be noted that the former findings are probably more robust than

the latter, since the meta-analyses of the adjustment facets on expatriate job performance in the Hechanova et al., (2003) study were only based on two coefficients. It appears then, that the magnitude of the correlations between expatriate job performance and the various facets do not provide very strong support for Black's (1988) definition of adjustment in terms of performance that was cited within the introduction.

From the explorative analyses that were carried out, it emerged that cultural flexibility, MMPI ego-strength, peer nominations, selection board ratings, tolerance for ambiguity, ethnocentrism, task leadership, people leadership, social adaptability and interpersonal interest all appear to hold promise as valid predictors of expatriate job performance. Absolute values for the sample-weighted correlations for these relationships ranged from $r = .11$ to $r = .34$. Although these findings are likely to be less robust than meta-analytic findings that are based on more studies, we believe these variables are certainly worthy of further investigation.

The findings regarding 'broad bandwidth' flexibility and cultural flexibility are of particular interest. Although no support was found for the relationship of 'broad bandwidth' flexibility with expatriate job performance, the current investigation provides preliminary evidence that more expatriate context-specific (cf. Fernandez de Cueto, 2004) aspects of flexibility do relate to expatriate job performance. That is, the exploratory meta-analysis on the effect of cultural flexibility on expatriate job performance revealed much more promising results ($r = .21$ instead of $r = .08$). It appears that for this predictor at least, higher context-specificity results in a higher predictive validity.

Based on domestic findings (Schmidt & Hunter, 1998), the fact that no relationship was found between intelligence and expatriate job performance is surprising. However, of all (exploratory) meta-analyses reported in this chapter, the combined sample size for the effect of intelligence on expatriate job performance was smallest ($N = 76$). In addition it should be noted that Mischel (1965), from whom one of the effects ($r = .00$, $N = 41$) originated calls for caution in the interpretation of his findings since the administration of the Wechsler Adult Intelligence Scale (WAIS) was "…drastically deviant from the standard procedure" (p. 511). The medium correlation ($r = .26$, $N = 35$) between intelligence and self-rated expatriate job performance that was reported by Deller (2000) appears more congruous with the domestic literature. Research into intelligence as a predictor of expatriate job

performance should therefore not be abandoned on the basis of the findings reported here.

With the exception of assignment tenure, biographic and control variables did not appear to have any relationship with expatriate job performance. Although the effect was only small, future researchers working at identifying selection context predictors of expatriate job performance, might consider taking into account the fact the longer expatriates are on assignment, the better they appear to perform.

The meta-analysis on the relation between gender and expatriate job performance showed that the high prevalence of males within this occupational category is unjustified. No gender differences in performance were found. Several biographic/background variables that were examined in relation to expatriate job performance did not hold up to what could be expected, e.g. cultural distance and Hofstede's (1980) dimensions. Based on the results of this investigation it appears that cultural distance does not affect job performance.

Finally, it is important to realize that the predictive validity of several strong domestic predictors such as cognitive tests, work sample tests, and the structured interview (see Schmidt & Hunter, 1998) unfortunately have barely been investigated in the expatriate context. As previously mentioned, only two studies (i.e., Deller, 2000; Mischel, 1965) could be located that had used intelligence tests, but no studies using assessment center scores or other work samples. Moreover, only two studies (i.e., Mischel, 1965; Volmer & Staufenbiel, 2003) had used an interview.

Although a definitive profile of the "ideal overseas type" may be premature at this point, we believe that the findings reported in this review are the most comprehensive basis currently available for the development of a valid predictor instrument. Based on the data reported earlier it would appear that such an instrument should focus on expatriates' extraversion, emotional stability, agreeableness, conscientiousness, local language ability, cultural sensitivity, cultural flexibility, social adaptability, ego-strength, interpersonal interest, tolerance for ambiguity, ethnocentrism, task leadership, and people leadership. In our opinion attributing any other characteristics to successful expatriates is not possible at this point because of the instability of the results.

This brings us to the more general issue of weaknesses of our study. To a certain extent these limitations are related to limitations of the primary studies. Firstly,

the number of primary studies available for each predictor was quite limited (the maximum being twelve for both extraversion and emotional stability). In addition, these studies also had relatively small sample sizes, the largest being 339 (Kraimer et al., 2001). Of the studies identified in the literature search a large percentage was theoretical in nature and only a small minority had attempted to actually validate predictors. Apart from the already mentioned omission of several potentially strong predictors in this research domain, the vast majority of studies lacked information on the relationship between marital status and job success even though marital status had been recorded in many studies (see Table 1). Because spousal and family support issues have had quite some attention as potential factors in the relevant literature (e.g., Ali, 2003), this omission is surprising. Yet another peculiar and important omission is the general unavailability of primary study information on the nationality of the supervisor responsible for the job performance ratings. Whether a supervisor has the home- or host-country nationality to our view is an important factor that may influence predictor-job performance relationships. Indeed, in their study on the cross-cultural equivalence of job performance ratings, Ployhart, Weichmann, Schmitt, Sacco, and Rogg (2003) found that error variances of the ratings, the pattern of construct variances, and intercorrelations with rater/ratee characteristics (age, tenure, and the supervisor's opportunity to observe the ratee) were largely culture-specific.

Another limitation is that the combination of types of operationalizations of job performance (task performance, overall performance, contextual performance and assignment-specific performance) could be responsible for at least some of the heterogeneity in the findings. In addition to types of dependent measures many other potential moderators exist, such as host vs. home country coworker-rated performance, self- vs. other-rated predictors, expatriate nationality, assignment tenure, kind of predictor instrument used (e.g. openness to experience vs. intellect), and assignment type (e.g. managerial vs. technical). Future research should set out to examine the influence of these and other moderators on the predictor-performance relationships.

As a final limitation, it should be noted although many of the effect sizes came out significant (i.e. their confidence intervals excluded zero), the size of the effects was moderate at best and the percentage of explained variance (i.e. r^2) did not exceed 12% for any variable. Although it was demonstrated that the expatriate Big Five factor validities were at worst equal to and in many cases exceeded the validities

reported in domestic meta-analyses, one could express doubts regarding the utility of these variables for expatriate selection. However, when one takes into consideration that assignments cost anywhere from US$ 300,000 to 1 million dollars annually (Black & Gregersen, 1999) and that the financial gain from improved selection is directly related to validity (Warr, 1996), it appears that expatriate selection on the basis of the variables identified in this review could result in considerable cost-savings, especially when multiple predictor variables that have low intercorrelations are included.

The aforementioned limitations readily point to several interesting future directions for research. First, several voids need to be filled. In particular, more data is needed on the predictive validity of cognitive ability tests, work sample tests and the structured interview. Additional background information on the supervisor is needed and should be checked for its effect on predictor-job performance relationships. The same point can be made for the potential effect of marital status and spousal support. Second, the mere size of the empirical database in the realm of expatriate job performance needs to increase. In this regard, Morris and Robie (2001) in their meta-analyses of the effects of cross-cultural training on expatriate performance and adjustment noted that "Most of the extant literature consists of the anecdotal experiences of former expatriate managers and tends to focus on rules of thumb or broad guidelines for behavior and training design without empirical support" (p. 121). The same criticism seems to apply to the expatriate selection literature.

A few notable exceptions notwithstanding, it appears that many consulting companies that offer expatriate selection instruments were not particularly eager to make their criterion related validity data available for inclusion in this investigation. Although this was more likely due to privacy concerns rather than lack of such data, the possibility remains that such data are simply unavailable. The relatively small empirical database on which this investigation was based is likely to be a reflection of the extreme practical difficulties encountered in gathering data from expatriates. Conducting research through e-surveys on the World Wide Web might alleviate this issue. Since most studies seem to have employed male American expatriates stationed in Asia, future research should endeavor to include samples that are more diverse so that findings may be generalized across all members of the expatriate population. Finally, Gregersen et al., (1996) have pointed to the importance of contextual criteria.

These result from the situation in which the expatriate is performing and pertain to factors which are beyond his or her control. An example of a contextual criterion would be the general economic climate for an expatriate who needs to sign an important contract with a local contractor. Although contextual criteria were not *perceived* to be positively related to expatriate performance appraisal accuracy in the study conducted by Gregersen et al., such criteria undoubtedly work to constrain or facilitate the expatriate's performance. It would be prudent for future researchers employing multidimensional operationalizations of expatriate job performance to address this issue as it relates to the performance dimensions at hand.

Chapter 3

Developing Criteria for Expatriate Effectiveness: Time to Jump off the Adjustment Bandwagon[*]

While job performance is quintessential to assessing expatriate effectiveness, significant domestic advances in performance measurement have seldom been applied to evaluating expatriate training and selection practices. Based on a critical assessment of expatriate research and deliberations about the conversion of these domestic taxonomies to the expatriate domain, this theoretical paper voices a number of propositions that should serve to benefit the field. Specifically, it is proposed that: 1) Dependent variables that have been employed thus far within the field of expatriate effectiveness are best construed as mediators between their predictors and yet to be delineated criteria of expatriate effectiveness that actually sample expatriate job performance; more adequate sampling of the expatriate job performance domain is called for; 2) Behaviorally specific criteria, such as those developed by Tett et al., (2000) are essential to the adequate assessment of expatriate job performance; 3) The dimensions of adaptive performance which were developed by Pulakos and colleagues (2000; 2002) constitute an important subdomain of expatriate job performance; and 4) An over-reliance on the generalization of domestic taxonomies will result in criterion deficiency, as expatriate specific criteria to complement these generalized criteria need to be developed.

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[*] The corresponding reference is: Mol, S.T., Born, M. Ph., & Van der Molen, H.T. (2005). Developing criteria for exaptriate effectiveness: Time to jump off the adjustment bandwagon. *International Journal of Intercultural Relations, 29*, 339-353.

On March 24, 1602, the world's first multinational company (MNC) ("A fine place to be," 2002) was established in The Netherlands in the form of the *United East India Company* (Verenigde Oost-Indische Compagnie; V.O.C.). As such, the V.O.C. was one of the first commercial organizations to send 'expatriates' abroad: It was responsible for expatriating nearly 1 million mostly Dutch and German employees to Asia between 1602 and 1795 (Van Gelder, 1997). Intriguingly, Trevenot, the pseudonym of an unknown German author of an obscure 18th century text, sketched a profile of the ideal candidate:

> "Those who have in their home countries endured hardship and ill fortune … those who have suffered hunger and thirst, who can work sedulously, who are patient and consider the harsh boat life to be more endurable than the adversity on the shore, those are the kind of people needed by the Company". The author continues with the assertion that the V.O.C. employees enjoy what tastes bitter and sour to others, as if it were the greatest delicacy. "They are content when they can perform their duties and thank God when they obtain a piece of bread" (Trevenot, as cited in Van Gelder, 1997, p.11).

Judging from the atrocious company-sanctioned hostility and brutality that these expatriates inflicted on local communities, it is hardly surprising that criteria that have come into vogue more recently, such as intercultural interaction (Clarke & Hammer, 1995; Hawes & Kealey, 1981; Kealey, 1989), did not exactly top the list. In contrast to V.O.C. times, many of today's MNC's seem genuinely concerned about the fruitfulness of the interaction between expatriates and members of local communities. This is corroborated by a recent worldwide survey, which showed that on average MNC's spend about USD 4,200 per expatriate on cross-cultural preparation (Windham-International, 2001). With a growing demand for effective expatriates came the arduous task to define what expatriate effectiveness is, and more importantly, to find ways of predicting and training it. Unfortunately, more than five decades of research on the topic (see Bhawuk & Brislin, 2000; Paige & Martin, 1996, for overviews) has failed to yield a clear and explicit knowledge structure of what it is we should be training and selecting for (Arthur & Bennett, 1995). In his literature review, Kealey (1996) too identifies this problem when he states that "There remains a dearth of solid empirical research that defines and describes concretely and

comprehensively the outcome behavior demonstrated by successful intercultural personnel" (p. 92). A more recent review of international management research published between 1996 and 2000 inclusive concluded that few studies have looked at expatriate performance or other behavioral consequences (Werner, 2002). Ones and Viswesvaran (1997) state that "The problem of the criterion has been almost more retarding an issue in the expatriate literature…than it has been in most domestic (within culture) studies in industrial/organizational psychology" (p. 75). This statement is illustrated by the fact that in their recent meta-analysis on antecedents and consequences of employees' adjustment to overseas assignments, Hechanova, Beehr, and Christiansen (2003) were able to include only two studies that actually assessed expatriate job performance. An exploratory study among US multinational firms by Gregersen et al. (1996) suggests that organizations too, are having a difficult time tackling issues associated with expatriate job performance. This study examined expatriate performance appraisal (EPA) practices and their perceived accuracy, and found that the use of multiple types of criteria (i.e., soft, hard and contextual), an increased number of raters, a balance of within host- and outside host-country raters, and an increased frequency of appraisal were all positively related to *perceived* EPA accuracy. It was concluded however that these practices were seldom implemented (Gregersen et al., 1996). Unfortunately, no examination of the relationship of these practices and true EPA was executed. With so many authors acknowledging the issue and so few researchers addressing it, perhaps the time has come to critically reassess our criterion development strategy.

The purpose of this theoretical paper is to delineate an innovative approach to assessing expatriate effectiveness. Within the following we will argue that criteria that assess expatriate job performance should be considered the focal operationalization of expatriate effectiveness. It will be contended that the realm of expatriate effectiveness has become saturated with a plethora of criteria of questionable utility and/or suspect methodological rigor. Subsequently, it will be argued that conventions and assumptions that have stood at the heart of previous research efforts have impeded the development of criteria that could find their way out of academia and into the HRM departments of MNC's. An overhaul of these core issues and their integration with recent perspectives from the personnel selection literature will culminate in the presentation of a number of propositions. Future research based on these propositions should serve to redress the current state of affairs.

3.1 What is amiss with currently available criteria of expatriate effectiveness?

Over the last five decades or so, a myriad of variables relating to expatriate effectiveness have appeared within the extant literature (see Black & Mendenhall, 1990; Dinges & Baldwin, 1996), examples of which are Adaptation and Social Isolation (Hullett & Witte, 2001). Causal relationships between such variables and job performance are more often assumed than empirically investigated. And when performance measures are included as criteria in an empirical study of expatriate effectiveness, they often appear to be lacking in methodological rigor. For example, although expatriate job performance was assessed in Spreitzer, McCall Jr., and Mahoney's (1997) study, they themselves were careful to point out that their one item performance measure was subject to common method variance because it was assessed by the same person and at the same time as the predictor measure. Because of this, a second performance measure (in the form of external performance appraisal data that were only available for a holdout sample) was included, but the small sample size (n=56) limited the ability to detect significant relationships (although some were found). In another study among expatriates of a U.S. MNC (Caligiuri, 2000), the supervisor was asked to make an overall assessment of the expatriate's job performance. Although the Big Five as a group significantly predicted this performance measure, only 9% of the variance in performance was accounted for. This finding appears to be a replication of the domestic meta-analytic finding that personality correlates only moderately with overall job performance (see for example Barrick & Mount, 1991).

Borman and Motowidlo (1993; 1997) divide the performance domain into a contextual and a task domain. They define contextual performance as activities that are directed at maintaining the interpersonal and psychological environment that needs to exist to allow the technical core to operate, and argue that contextual performance is important because it "shapes the organizational, social, and psychological context that serves as a critical catalyst for task activities and processes" (Borman & Motowidlo, 1993, p. 71). Task performance on the other hand is defined as "the effectiveness with which job incumbents perform activities that contribute to the organization's technical core either directly by implementing a part

of its technological process, or indirectly by providing it with needed materials or services" (Borman & Motowidlo, 1993, p. 72). Borman and Motowidlo's (1997) domestic finding that personality relates higher to the contextual domain of job performance than to overall job performance, may very likely generalize to an expatriate context. In essence this finding is an empirical illustration of the notion that increased specificity in the job performance domain is needed for meeting key research challenges (Tett et al., 2000), an issue that will be discussed in greater detail below.

In summary, although many studies have been conducted within the field of expatriate effectiveness, few have addressed the most unequivocal candidate criterion, namely performance. Those studies that have addressed performance appear to be lacking in methodological rigor. What the field needs is consensus on an operational definition of expatriate effectiveness, and the methodology to be employed in predicting and/or training it. In order to reach a compelling operational definition, the core issues inherent to research pertaining to expatriate performance will now be critically examined.

3.2 Core issues in the development of criteria for expatriate effectiveness

Defining criteria for expatriates

As was discussed earlier, the often-implicit assumption that existing operational definitions of expatriate effectiveness will affect performance is widespread and seldom empirically investigated. Austin and Villanova (1992) defined the term criterion as "a *sample of [job] performance* [italics added] (including behavior and outcomes), measured directly or indirectly, perceived to be of value to organizational constituencies for facilitating decisions about predictors or programs" (p. 838). Motowidlo (2003) defines job performance as the total expected value to the organization of the discrete behavioral episodes that an individual carries out over a standard period of time. Similarly, Campbell (1990) defines job performance as a set of behaviors that are relevant for the goals of the organization, and effectiveness as the outcomes that stem from these behaviors. Translating the latter definition to the

realm of expatriates, a definition for expatriate effectiveness is the extent to which the expatriate's job performance reflects behaviors that are relevant to the organization's goals.

On the basis of these definitions, many of the dependent variables that have been employed within the field of expatriate effectiveness need to be dismissed as criteria because evidently they do not sample performance (Arthur & Bennett, 1995; Kealey, 1996; Werner, 2002) nor are they perceived to be valuable by organizational constituencies (Arthur & Bennett, 1995; Mendenhall & Oddou, 1985).

So, what role could be ascribed to variables such as adaptation, intercultural effectiveness and spousal adjustment, so that previous research findings about these variables may be integrated in future models of expatriate effectiveness? It is our contention that such variables may be perceived as either moderators or mediators within these models. More specifically, previously investigated intra-expatriate variables such as adaptation or intercultural effectiveness could be construed as potential mediators between their predictors and yet to be delineated criteria of expatriate effectiveness that actually sample the expatriate's job performance. Extra-expatriate variables such as spousal adjustment on the other hand may potentially be ascribed a new role as moderators in such relationships.

Proposition 1. Dependent variables that have been employed thus far within the field of expatriate effectiveness are at best construed as either moderators or mediators between their predictors and yet to be delineated criteria of expatriate effectiveness that actually sample expatriate job performance in future models of expatriate effectiveness.

Ultimately, variables such as spousal adjustment (Black & Gregersen, 1991), ability to establish intercultural relationships (Hammer, 1987; Hammer, Gudykunst, & Wiseman, 1978), or the number of languages spoken (Spreitzer et al., 1997), become relevant and useful to MNC's only upon having been shown to actually relate to performance. In legal terms, an organization would be hard-pressed justifying the rejection of an applicant purely on the basis of the prediction that his or her spouse

will not be able to adjust. To our knowledge, no data exist about the relationship between spousal adjustment and expatriate performance. Interestingly, however, no confirmation was found for the hypothesis that *spousal support* would relate to expatriate work and general adjustment in a recent study of expatriate sources of support, and correlations with expatriate task and contextual performance were negligible (Kraimer, Wayne, & Jaworski, 2001). Unfortunately, task and contextual performance were only assessed by six items within this study, which casts doubt on the adequacy with which the performance domain was sampled (Binning & Barrett, 1989). As is the case with many supposed relationships between variables in the expatriate management domain, to date there is no data for the claim that spousal adjustment is critical to expatriate job performance, and perhaps it should be gathered more conscientiously.

In conclusion, in the prediction and training of expatriate effectiveness, the ultimate criterion is job performance. However, in practice little effort has been made to develop proper criteria for the validation of predictors and/or training programs. Variables that currently fulfill the role of criteria are probably best conceived of as either moderators or mediators. Having discussed the necessity of developing proper performance criteria for expatriate selection and training practices, let us now examine strategies that researchers may employ in assessing them.

3.3 How may the expatriate job performance domain be modeled?

It has been argued elsewhere (Sinangil & Ones, 2001) that the existing literature in the realm of domestic job performance, such as the well known taxonomies developed by Campbell and colleagues (Campbell, 1990; Campbell, Gasser, & Oswald, 1996; Campbell, McCloy, Oppler, & Sager, 1993), Viswesvaran and colleagues (Viswesvaran, 1993; Viswesvaran & Ones, 2000; Viswesvaran, Schmidt, & Ones, 1994; Viswesvaran, Schmidt, & Ones, 1996) and Borman and Motowidlo (1993; 1997) are applicable to defining and measuring expatriate job performance. The main argument in favor of generalizing domestic models is that they were constructed to apply across jobs, settings and industries with specific content and aspects of each dimension varying across jobs (Ones & Viswesvaran,

1997; Sinangil & Ones, 2001). On the basis of their review of these models, Sinangil and Ones (2001) depict a working model of expatriate job performance that consists of nine dimensions. Ones and Viswesvaran (1997) too, have adapted their domestically developed job performance components to apply specifically to expatriates (see Table 1). In doing so, their assumption is that the components of their domestic job performance taxonomy will generalize to expatriate managers and other international assignees. These two models have considerable overlap, as can be observed from Table 1. Another feature these models have in common is that they both employ a generalist, or broad bandwidth, approach to defining criteria for expatriate job performance, in the sense that they consist of a limited number of broad dimensions. Researchers interested in applying these domestically developed broad bandwidth models to the assessment of expatriate effectiveness, should take notice of the fact that within a domestic context there is an ongoing discussion concerning the premises on which broad bandwidth models were built.

The discussion concerning these premises was summarized in detail by Tett et al. (2000). They have evocatively argued for more specificity in the job performance domain.

Table 1: Broad bandwidth models of expatriate job performance

Working model of expatriate job performance (Sinangil & Ones, 2001)		**Job performance components for expatriates (Ones & Viswesvaran, 1997)**	
Dimension	Definition	**Dimension**	Definition
Productivity	Volume of work produced by the expatriate	**Productivity**	Volume or quantity of work produced by the expatriate
Communicating and Persuading	Oral and written proficiency in gathering and transmitting information;	**Communication competence**	Oral and written proficiency in gathering and transmitting

	persuading others		information
Effort and Initiative	Dedication to one's job; amount of work expended in striving to do a good job	**Effort and initiative**	Dedication to one's job; amount of work expended in striving to do a good job
Personal Discipline	The extent to which counterproductive behaviors at work are avoided	**Compliance with / acceptance of authority**	The extent to which counterproductive behaviors at work are avoided
Working with others	Proficiency in working with others, assisting others in the organization	**Interpersonal relations**	Proficiency in working with others and facilitating team performance
Interpersonal Relations	The degree to which the expatriate facilitates team performance; supports and champions others in the organization and unit	**Leadership**	The degree to which the expatriate supports and champions others in the organization or unit
Management and Supervision	Proficiency in the coordination of different roles in the organization	**Administrative competence**	Proficiency in the coordination of different roles in the organization
Technical Performance	Task performance	**Quality**	Quality of work produced
		Job Knowledge	Measure of knowledge required to carry out the

	tasks of the job
Establishing and maintaining contacts	Identifying, developing and maintaining business contacts to achieve goals
Overall job performance	Composite of all dimensions of expatriate job performance described above; also refers to the general non-halo factor that is hierarchically extracted from ratings of job performance dimensions

They state that assessing job performance on broad bandwidth components involves the risk of erroneously assuming that specific exemplars within these general categories are equivalent with respect to function, causes, and measurement. In contrast, they assert that there should be an emphasis on unique features of job performance behavior. In particular, Tett et al. (2000) contend that increased specificity will result in a more refined person-situation fit, a more complete understanding of causes, effects and measurement, and greater construct specificity than what the generalist performance models have to offer. Central to this argument is the so-called fidelity-bandwidth tradeoff, in which, given the practical restrictions on test length, fidelity (i.e., construct measurement precision) is negatively related to bandwidth (i.e., the number of separate constructs assessed by a measure). Tett et al. (2000) have voiced a number of inferences, which in our opinion are just as valid for

the delineation of expatriate job performance criteria. These are: a) Predictive accuracy may be improved with the use of more specific and articulate performance measures; b) Complexity with respect to content must be matched between the criterion and predictor spaces; c) Specific measures, even if they are relatively short, are not by definition less reliable; and finally, d) Distinct measures of specific relevant constructs are likely to be more efficient because less time is spent measuring superfluous content.

In addition to these inferences, there are two more expatriate particular grounds for specificity in the delineation of the expatriate job performance domain. First, there appears to be a problem with the logical underpinnings associated with generalizing the broad bandwidth models. Both Ones and Viswesvaran (1999) and Sinangil and Ones (2001) acknowledge that critical incidents for the dimensions will be different for expatriates. With dimension content changing in the generalization from domestic jobs to expatriate jobs, one may wonder whether this is not simply a case of comparing apples and oranges.

A second and related rationale for specificity may be found in the myriad of cultural contexts in which the expatriate is expected to perform. As may be observed from Table 1, both Sinangil and Ones (2001) and Ones and Viswesvaran (1997), for example, include the dimension Effort and Initiative in their models of expatriate job performance. The constructs Effort and Initiative may be subsumed in one dimension in a Western cultural context because of their apparent inextricable relatedness. Yet, it is imperative to realize that they may be differentially valued by organizational constituencies in other cultures. Although Effort is likely to be a universally desired criterion, Initiative may in fact be counterproductive in more dutiful cultures such as Japan (Dore, 1987). While the dimension Effort and Initiative is probably the most clear-cut example, it is not at all unlikely that the other dimensions that have been delineated by these researchers might be afflicted with the same inherent predicament due to their broad nature. With dimension content changing in the generalization from domestic jobs to expatriate jobs, one may wonder what the use of generalizing these models is in the first place. The fact that these models preclude the possibility to address this issue in conjunction with the previously discussed arguments should be reason for researchers to think twice about employing a generalist approach to assessing expatriate effectiveness, and to favor a more specifist approach instead. In

order to illustrate how a specifist approach could allow for the detection of a differential appreciation of criteria across cultures let us now return to Tett et al. (2000), who include the competency Initiative as a separate construct in their 53 competency hyperdimensional taxonomy of managerial job performance. In this case, cross-cultural desirability may be investigated because the content that may be subsumed under the competency Initiative is more homogenous. These deliberations lead us to propose the following:

Proposition 2. Behaviorally specific criteria, such as those developed by Tett et al., (2000) are essential to the adequate assessment of expatriate job performance.

Sinangil and Ones (2001) have noted that "perhaps the most important element that distinguishes expatriate jobs from other high complexity and high responsibility jobs is an added element of complexity by the intercultural environment in which these jobs are performed" (p. 425). The dynamic nature of this environment may be expected to place great demands on the expatriate's adaptability to changing situations. Indeed, many of the dependent variables that have been studied within the expatriate research literature have focused on adjustment (e.g., Takeuchi, Yun, & Russell, 2002) or adaptation (e.g., Yavas, 2001). However, as discussed previously, such variables have not constituted criteria proper because of the fact that they have not typically been aimed at sampling job performance. Interestingly, within the domestic personnel selection literature the domain of adaptive performance has been steadily increasing in popularity (Allworth & Hesketh, 1997, 1998; Hesketh & Neal, 1999; Pulakos et al., 2000; Pulakos et al., 2002). Pulakos and colleagues have developed a taxonomy of adaptive performance consisting of the following eight dimensions: Handling emergencies of crisis situations; Handling work stress; Solving problems creatively; Dealing with uncertain and unpredictable work situations; Learning work tasks, technologies, and procedures; Demonstrating interpersonal adaptability; Demonstrating cultural adaptability; and Demonstrating physically oriented adaptability (see Table 2).

Table 2: The Eight Dimensions of Adaptive Performance (Pulakos et al., 2000; 2002)

Dimension title	Dimension definition
Handling emergencies or crisis situations	Reacting with appropriate and proper urgency in life threatening, dangerous, or emergency situations; quickly analyzing options for dealing with danger or crises and their implications; making split-second decisions based on clear and focused thinking; maintaining emotional control and objectivity while keeping focused on the situation at hand; stepping up to take action and handle danger or emergencies as necessary and appropriate.
Handling work stress	Remaining composed and cool when faced with difficult circumstances or a highly demanding workload or schedule; not overreacting to unexpected news or situations; managing frustration well by directing effort to constructive solutions rather than blaming others; demonstrating resilience and the highest level of professionalism in stressful circumstances; acting as a calming and settling influence to whom others look for guidance
Solving problems creatively	Employing unique types of analyses and generating new, innovative ideas in complex areas; turning problems upside-down and inside-out to find fresh new approaches; integrating seemingly unrelated information and developing creative solutions; entertaining wide-ranging possibilities others may miss; thinking outside the given parameters to see if there is a more effective approach; developing innovative methods of obtaining or using resources when insufficient resources are available to do the job.

Dealing with uncertain and unpredictable work situations	Taking effective action when necessary without having to know the total picture or have all the facts at hand; readily and easily changing gears in response to unpredictable or unexpected events and circumstances; effectively adjusting plans, goals, actions, or priorities to deal with changing situations; imposing structure for self and others that provide as much focus as possible in dynamic situations; not needing things to be black and white; refusing to be paralyzed by uncertainty or ambiguity.
Learning work tasks, technologies, and procedures	Demonstrating enthusiasm for learning new approaches and technologies for conducting work; doing what is necessary to keep knowledge and skills current; quickly and proficiently learning new methods or how to perform unlearned tasks; adjusting to new work processes and procedures; anticipating changes in the work demands and searching for and participating in assignments or training that will prepare self for these changes; taking action to improve work performance deficiencies.
Demonstrating interpersonal adaptability	Being flexible and open-minded when dealing with others; listening to and considering others' viewpoints and opinions and altering own opinion when it is appropriate to do so; being open and accepting of negative or developmental feedback regarding work; working well and developing effective relationships with highly diverse personalities; demonstrating keen insight of others' behavior and tailoring own behavior to persuade, influence or work more effectively with them.
Demonstrating cultural adaptability	Taking action to learn about and understand the climate, orientation, needs, and values of other groups, organizations or cultures; integrating well

	into and being comfortable with different values, customs and cultures; willingly adjusting behavior or appearance as necessary to comply with or show respect for others' values and customs; understanding the implications of one's actions and adjusting approach to maintain positive relationship with other groups, organizations or cultures.
Demonstrating physically oriented adaptability	Adjusting to challenging environmental states such as extreme heat, humidity, cold, or dirtiness; frequently pushing self physically to complete strenuous or demanding tasks; adjusting weight and muscular strength or becoming proficient in performing physical tasks as necessary for the job.

To construct this taxonomy Pulakos et al. (2000) gathered 121 out of a total of 8695 critical incidents from an expatriate subsample. However, to our knowledge this taxonomy has never been used to actually assess expatriate job performance for the validation of predictors or training modules. Pulakos et al. originally intended adaptive performance to complement the relatively broad domains of task and contextual performance that were originally proposed by Borman and Motowidlo (1993; 1997). Nevertheless, the eight subdimensions (see Table 2) appear to have a degree of specificity that approaches the specificity that was proposed earlier in this paper. They seem specific enough to assess potential cross-cultural fluctuations in desirability within local organizational constituencies. Since adaptive performance was not specifically addressed by Tett et al., (2000), its subdimensions may be a valuable complementary job performance subdomain.

Proposition 3. The dimensions of adaptive performance, which were developed by Pulakos and colleagues (2000; 2002), constitute an important subdomain of expatriate job performance.

A final issue to discuss is the fact that the domestic job performance taxonomies discussed within the above, were not specifically intended for the assessment of expatriate job performance. That is, expatriate specific performance behaviors, such as coping with dual allegiance issues vis-à-vis the parent firm and the local foreign operation (Black & Gregersen, 1992), are not incorporated within these models. Yet, such expatriate specific performance behaviors are likely to be crucial to an adequate assessment of the expatriate's effectiveness. Failure to address this issue is almost certain to result in criterion deficiency.

Proposition 4. An over reliance on the generalization of domestic taxonomies will result in criterion deficiency. Expatriate specific criteria that complement the generalized criteria need to be developed.

In order to determine the criteria that comprise this expatriate specific job performance domain, it is necessary to gather and content analyze critical incidents from diverse cultural, organizational, and occupational settings. It is likely that such critical incidents will reveal considerable overlap across expatriate jobs. Indeed it may be possible to construct an expatriate specific performance taxonomy that complements the previously discussed taxonomies which were constructed by Pulakos et al., (2000; 2002) and Tett et al., (2000) Taken together these taxonomies should be able to yield a more than adequate sampling of the expatriate job performance domain (cf. Binning & Barrett, 1989).

In this regard, the endeavor to develop a Profile of the Interculturally Effective Person (Vulpe, Kealey, Protheroe, & MacDonald, 2001) certainly deserves mention. This proposed profile consists of three levels, ranging from general-level major competencies, through more focused core competencies to detailed behavioral indicators. The first level of this profile is comparable in generality to the dimensions proposed by Sinangil and Ones (2001) and Ones and Viswesvaran (1997), while the third level approaches the degree of specificity proposed by Tett et al. (2000). As such, this profile seems to answer the call for increased specificity (see proposition 2) that was voiced earlier. In addition, this profile sheds light on the expatriate specific aspect of the expatriate performance domain.

The nine general level competencies incorporated within Vulpe, et al.'s (2001) profile are: (a) adaptation skills (cf. Pulakos et al, 2000; 2002), (b) an attitude of modesty and respect, (c) an understanding of the concept of culture, (d) knowledge of the host country and culture, (e) relationship building (f) self-knowledge, (g) intercultural communication, (h) organizational skills, and (i) personal and professional commitment. Vulpe et al. (2001), assert that the profile "can be used as a guide for designing pre-departure training programs, for improving selection procedures for international personnel, and for evaluating their performance on assignment…. [and that] …it can also be used for composing job descriptions, in project planning and as a self-development guide" (p. 5). Although this profile and its behavioral indicators are the result of an impressive amount of deliberation, the theoretical underpinnings of this profile could be elaborated upon. Moreover, empirical data needs to be collected to find support for the suggested competencies.

3.4 Discussion

Within this chapter, it has been argued that expatriate job performance may be considered the ultimate criterion in the prediction and training of expatriate effectiveness. The recently developed domestic models of job performance, especially those of Pulakos et al. (2000; 2002) and Tett et al. (2000), that were discussed within the above, may prove to be an extremely valuable guide to the study of expatriate effectiveness. Although there are methodological concerns associated with applying these models in an intercultural environment, it is our opinion that these are not unsurpassable. In addition it appears that the Profile of the Interculturally Effective Person (Vulpe, Kealey, Protheroe, & MacDonald, 2001) could shed more light on the expatriate specific side of the expatriate job performance domain, once this profile is validated empirically.

This paper was aimed at highlighting some major concerns that are intrinsically related to the prediction and training of expatriate effectiveness. In doing so, the following propositions were advanced: 1) Dependent variables that have been employed thus far within the field of expatriate effectiveness are best construed as mediators between their predictors and yet to be delineated criteria of expatriate effectiveness that actually sample expatriate job performance. More adequate

sampling of the expatriate job performance domain is called for; 2) Behaviorally specific criteria, such as those developed by Tett et al., (2000) and Vulpe et al., (2001) are essential to the adequate assessment of expatriate job performance. Contrary to general dimensions, specific criteria should allow one to investigate the effects of differential desirability of expatriate work behaviors to organizational constituencies across cultures; 3) The dimensions of adaptive performance developed by Pulakos and colleagues (2000; 2002) constitute an important subdomain of expatriate job performance; And 4) an over reliance on the generalization of domestic taxonomies will result in criterion deficiency; expatriate specific criteria, such as those developed by Vulpe et al., (2001) that complement the generalized criteria need to be developed.

Contrary to delineating the whole expatriate job performance domain from scratch, complementing a generalization effort with the gathering of critical incidents for the expatriate specific job performance subdomain should result in all the more bandwidth for the latter effort!

It is our assertion that future research efforts that employ these propositions as a starting point will result in criteria that better meet the needs of multinational organizations. Although expatriate failure rates, which are frequently defined as premature re-entry, are probably not much higher than domestic turnover rates (Harzing, 1995), the consequences of failure for expatriates, family members and MNC's are much greater. If delineating performance criteria for the selection of domestic employees is important, it surely is crucial for expatriates.

Chapter 4

Predicting Multidimensional Expatriate Job Performance*

The first goal of this investigation was to replicate the Mol, Born, Willemsen, and Van Der Molen (2005) findings regarding the predictability of expatriate job performance on the basis of the Five Factor Model (FFM) dimensions, local language ability, intercultural sensitivity, previous international experience, and cultural flexibility. Second, it was hypothesized that intelligence, core self-evaluations, tolerance for ambiguity, tolerance for uncertainty, need for cognition, category width, and implicit cultural adaptability theories would relate positively to expatriate job performance. The third goal was to examine the predictive power of each predictor in light of the other predictors, and a fourth goal was to examine the predictive power of each predictor on each of four factor analytically derived performance dimensions, namely task performance, strategic planning and decision making, adaptive performance, and interpersonal communication skills and diplomacy. All predictor variables with the exception of previous international experience, intelligence, tolerance for uncertainty, category width, and implicit cultural adaptability theories were found to relate to expatriate job performance. Yet, regression analyses onto overall performance and the four performance subdimensions indicated that the FFM dimensions might be necessary and sufficient in the prediction of expatriate job performance. Results are discussed in light of findings in both the domestic and expatriate literatures.

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* The corresponding reference is: Mol, S.T., Born, M. Ph., Willemsen, M. E., Hoekstra, H. A., Van Der Molen, H.T. (2007). *Predicting Multidimensional Expatriate Job Performance*. Manuscript submitted for publication.

Right until Harzing (1995) published her seminal paper on the persistent myth of high expatriate failure rates, many academics researching expatriates were justifying their research through the negation of the "If it ain't broke don't fix it" maxim by citing huge percentages of expatriate failures. Either implicitly or explicitly (e.g., Brewster, 1991) it was postulated that such high failure rates could be averted through the research subsequently presented (e.g. a study focusing on expatriate selection or expatriate training), although astoundingly few studies actually employed premature returns as a criterion. Indeed, Hechenova, Beehr and Christiansen (2003b) in their meta-analysis of antecedents and consequences of expatriate adjustment located a number of studies that had focused on turnover intent, but state that "an important part of the puzzle is missing-actual turnover" (227). Furthermore, Harzing unambiguously demonstrated that nearly all high failure claims that she was able to locate through a thorough literature review were based on poor citing practices. Of the 31 studies she included, only one presented data from an original multi-country multi-nationality study and three presented original data from single country/single nationality or otherwise limited studies with the remaining 27 studies presenting no original data. After reviewing the little evidence that was available from the four original studies only, she concluded that there was "very little empirical proof for the persistent claim of high expatriate failure rates when measured as premature returns" (p. 471). In addition, she stated that with about five percent on average, expatriate failure rates are probably not much higher than the failure rates of domestic employees.

It is important to note that this low prevalence of failures implies very little variance when premature returns are used as a job performance criterion. In practical terms this means that validation studies employing premature returns as a criterion will require huge sample sizes to demonstrate predictive power of potentially important selection context predictors. Yet, such large expatriate samples are difficult to obtain because expatriates, unlike domestic employees, are from and located in the full spectrum of countries around the world. Although the use of internet surveys may offer some alleviation to this problem, researchers will still need to locate persons for participation in their expatriate research. The temporary nature of expatriate assignments is an additional hurdle in obtaining adequate sample sizes since address information is quickly outdated. When taken together with other reservations voiced

by Harzing about the operationalization of the premature returns construct, such as the fact that a badly performing expatriate who stays on assignment might be far more damaging to the company than an expatriate who returns early, there is a strong case for a more subtle operationalization of expatriate effectiveness.

Although research in the field of expatriate management has burgeoned, it is interesting to note that relatively few studies have examined the prediction of expatriate job performance for selection purposes. This may be evidenced by the fact that of the four expatriate oriented meta-analyses that have been published in the extant expatriate literature (i.e., Deshpande & Viswesvaran, 1992; Hechanova et al., 2003b; Mol, Born, Van Der Molen et al., 2005; Morris & Robie, 2001), only the meta-analysis by Mol et al. has focused on the prediction of expatriate job performance for selection purposes. This is worrisome when one considers the central role that the prediction of job performance has attained in domestic personnel psychological research, as has been documented in professional guidelines such as the fourth edition of the SIOP Principles for validation and use of personnel selection procedures (SIOP, 2003), and even government legislation in countries such as the United States ("Uniform Guidelines on Employee Selection Procedures", 1978) and South Africa ("Employment Equity Act", 1998). Indeed, in their meta-analysis Mol et al. (2005) were only able to locate 30 independent studies with a total sample size of 4046 that had explicitly set out to predict expatriate job performance. On the basis of these primary studies, they found support for relationships with job performance of four of the dimensions of the Five Factor Model (see Digman, 1990; Goldberg, 1993; McCrae & John, 1992), namely extraversion, emotional stability, agreeableness, and conscientiousness. Yet, contrary to expectations, no support was found for the predictive validity of openness on expatriate job performance. They further found that expatriate validities of the Five Factor Model (FFM) personality dimensions are at least as high as those found for domestic employees. In addition, they found support for expatriate-specific predictors of expatriate job performance, namely local language ability and intercultural sensitivity. Of the expatriate specific predictors, no predictive validity was established for previous international experience.

Although the meta-analysis of Mol et al. contributed to the extant literature by clarifying which predictors of expatriate job performance have yielded most consistent support, several issues in expatriate selection warrant further research.

First, the aforementioned predictors that were tested for their relationship with expatriate job performance in the meta-analysis reflected only a small subsample of all the predictors that have been hypothesized within the expatriate management literature to relate to expatriate job performance, expatriate effectiveness or expatriate success. Other potentially valid predictors than those reported by Mol et al. may be identified once their relationship with expatriate job performance has been empirically investigated. The authors noted for example that surprisingly intelligence had seldom been investigated as a predictor of expatriate job performance. The two effect sizes that they were able to investigate did not yield consistent support for the predictability of expatriate job performance based on intelligence. More research on the relationship between intelligence and expatriate job performance is certainly warranted, since the exploratory findings reported in the meta-analysis stand in stark contrast to domestic findings supporting intelligence as one of the best predictors of performance in jobs that match expatriate jobs in their complexity (see for example Schmidt & Hunter, 2004).

Second, the Mol et al. meta-analysis did not allow for an examination of incremental validity of certain predictors up and over other predictors. Although knowledge of which individual differences variables relate to expatriate job performance is important, it can lead to an overwhelming list of predictors as evidenced by the meta-analytic findings. Practitioners in the field of expatriate management will require a more parsimonious expatriate selection model to work with, which may be accomplished by choosing those variables that explain unique portions of variance in expatriate job performance. Evidence for unique contributions by variables can only be generated in a single empirical study that incorporates individual differences variables potentially relevant to the prediction of expatriate job performance.

Third, and this point also holds for most of the domestic meta-analyses that examined predictors of job performance as well, Mol et al. only examined predictive validities onto overall performance. There is a considerable consensus among researchers about the multidimensional nature of job performance, both within domestic (Borman & Brush, 1993; Borman & Motowidlo, 1997; Campbell, McCloy, Oppler, & Sager, 1993; Motowidlo, 2003; Murphy & Harris Shiarella, 1997; Pulakos et al., 2002; Salgado, Moscoso et al., 2003b) and expatriate (Ackerman, 1989;

Caligiuri & Day, 2000; Mol, Born, & Van der Molen, 2005; Shaffer, Gregersen, Ferzandi, Harrison, & Black, 2006; Sinangil & Ones, 2003; Spreitzer, McCall Jr., & Mahoney, 1997; Tucker, Bonial, & Lahti, 2004) contexts. For example, within the domestic context Campbell et al. (1993) constructed a taxonomy of higher order performance components. This taxonomy consists of eight dimensions, namely 1) job specific task proficiency, 2) non-job specific task proficiency, 3) written and oral communication proficiency, 4) demonstration of effort, 5) maintenance of personal discipline, 6) facilitation of peer and team performance, 7) supervision/leadership and 8) management/administration. Within the expatriate context Harrison and Shaffer (2005) posited the criterion space for expatriate success to consist of overall performance. In addition they distinguished task completion and relationship building as parts of the expatriate criterion space. They found support for "a causal chain of affect, allocation of cognitive resources and behaviors for expatriates on international assignment that flowed through three sets of constructs: psychological adaptation, effort regulation and job performance" (p. 1469). For purposes of validating predictors of multidimensional job performance we adopt the previously explicated position (Mol, Born, & Van der Molen, 2005) that adjustment or adaptation mediated performance is not a useful starting point. Rather, we are interested in examining direct effects of predictors on multidimensional expatriate job performance. A thorough understanding of how specific predictors directly relate to specific performance subdomains could assist researchers and practitioners alike, in choosing those predictors that are important to the specific expatriate job at hand.

In summary, the present research set out to contribute to the extant literature through the examination of a) whether the Mol et al. meta-analytic findings could be replicated in a single empirical study; b) additional predictors that to our knowledge have not previously been investigated in relation to expatriate job performance; c) differences in predictive power of predictors in light of a large set of alternative predictors of expatriate job performance and d) how specific predictors relate to specific performance subdomains. To this end we developed the Expatriate Personality Characteristics Questionnaire (EPCQ) with the explicit aim of predicting expatriate job performance.

4.1 Replicating the Mol et al. (2005) findings

Most of the variables included in this instrument, namely the FFM personality dimensions, intercultural sensitivity, local language ability, cultural flexibility, and tolerance for ambiguity, were originally identified in the meta-analysis by Mol et al. (2005). Although openness was not supported as a predictor of expatriate job performance, the effects for openness appeared to be heterogeneous across studies, pointing to possible moderation. The authors stated that future studies might well find support for the predictability of expatriate job performance by openness. The same was true for the effects of previous international experience. In line with these meta-analytic findings, our first expectations are the following:

> Hypothesis 1(a-i): All of the Five Factor Model personality dimensions (extraversion (1a), emotional stability (1b), agreeableness (1c), conscientiousness (1d) and openness (1e)) and the expatriate specific predictors (local language ability (1f), intercultural sensitivity (1g), previous international experience (1h), and cultural flexibility (1i)) will relate positively to expatriate overall job performance.

4.2 Alternative predictors of expatriate job performance

Other promising predictors of expatriate job performance are intelligence and core self evaluations, which both have received a good deal of support in mainly domestic research. More expatriate oriented predictors, that have been suggested to relate to expatriate success indices by several researchers, also seem promising. These predictors are tolerance for ambiguity (Mol, Born, Van Der Molen et al., 2005; Nishida, 1985; Ruben & Kealey, 1979), tolerance for uncertainty (Gudykunst & Nishida, 2001; Hullett & Witte, 2001), need for cognition (Caligiuri, 1995), and category width (Detweiler, 1980). Finally, implicit cultural adaptability theories were included as a novel predictor in this investigation. The theoretical considerations and our hypotheses as to why these individual differences variables should be predictive of expatriate job performance are presented below.

As mentioned earlier, the domestic support for the predictability of job performance on the basis of intelligence is overwhelming (see for example Robertson & Smith, 2001; Schmidt & Hunter, 2004; Schmidt & Hunter, 1998). This and the fact that intelligence has seldom been investigated in relation to expatriate job performance makes this construct a prime candidate predictor of expatriate job performance. The previously mentioned studies that have explored intelligence in relation to expatriate job performance found mixed support on the basis of small samples. Deller (2000) on the basis of a concurrent study of German expatriates in Korea reported the following effects of the Advanced Progressive Matrices (APM) test on self-rated performance (r=.26, ns., N=35) and other-rated performance (r=.66, $p < .001$, N=22) and Mischel (1965) reported a nonexistent correlation (r=.00, ns., N=41) on the basis of a longitudinal study with American Peace Corps volunteer teachers stationed in Nigeria. However, Mischel calls for caution in the interpretation of his findings because the administration of the Wechsler Adult Intelligence Scale (WAIS) was "drastically deviant from the standard procedure" (p. 511). Judging from the small sample sizes, together with the divergence of the findings, these results are obviously far from conclusive. Yet, Salgado, Anderson et al. (2003) on the basis of their domestic meta-analysis on general mental ability validity for different occupations in the European Community concluded that GMA tests are likely to be robust predictors of expatriate job performance for expatriate assignments across Europe and the United States. Indirect evidence for the relationship between intelligence and expatriate job performance is provided by Lievens, Harris, Van Keer and Bisqueret (2003). In a longitudinal study that examined the validity of a large set of predictors for selecting European managers for a cross cultural training program in Japan, they found that intelligence did not significantly predict training performance ($r = .09$, ns., $N = 78$) but that it did significantly predict managerial trainees' language proficiency ($r = .23$, $p < .05$, $N = 78$) after completing the twelve month training period. Given that Mol et al. (2005) found that local language was predictive of expatriate job performance, it may at the very least be the case that intelligence predicts expatriate job performance by virtue of an enhanced local language ability. Thus, on the basis of mostly domestic support and indirect expatriate specific support for the predictability of job performance on the basis of intelligence, it is hypothesized here that:

Hypothesis 2: Intelligence will relate positively to expatriate overall job performance.

Recently Judge and colleagues (Bono & Judge, 2003; Judge & Bono, 2001; Judge, Erez, Bono, & Thoresen, 2003; Judge, Locke, & Durham, 1997) postulated core self evaluations as a fundamental personality trait. Judge et al. (2003) showed that core self evaluations had incremental validity over the Five Factor Model in the prediction of job performance. Core self-evaluations are defined as bottom line evaluations that individuals hold about themselves, and reflect a broad dispositional trait that is indicated by four more specific traits, namely self-esteem, generalized self-efficacy, locus of control and emotional stability (Judge et al., 1997). Within the expatriate context Johnson, Kristof-Brown, Van Vianen, De Pater, Klein (2003) argued that individuals with positive core self evaluations would be more likely to believe that they can be successful in the assignment and that as a result they would be more motivated to cultivate the social relationships thought to be instrumental to their success abroad. Their exploratory study provided support for this argument by showing that core self evaluations, but not extraversion was positively related to the number of social ties that expatriates formed both with host country nationals and other expatriates. So, it is proposed here that core self-evaluations will be predictive of expatriate job performance:

Hypothesis 3: Core self evaluations will relate positively to expatriate overall job performance.

Similarly to intelligence and core self-evaluations, tolerance for ambiguity (a very similar construct to tolerance for uncertainty) is an appealing predictor of expatriate job performance that has seldom been investigated within the expatriate management literature (please refer to the method section for definitions of both constructs). Indeed, Mol et al. (2005) pooled effects of both tolerance for ambiguity and tolerance for uncertainty on expatriate job performance, and concluded that it holds promise as a predictor. In the present investigation it was therefore decided to

investigate the effects onto expatriate job performance of both tolerance for ambiguity and tolerance for uncertainty. It was thus hypothesized that:

> Hypothesis 4(a-b): Both tolerance for ambiguity (4a) and tolerance for uncertainty (4b) will relate positively to expatriate overall job performance.

Need for cognition reflects a tendency to seek and enjoy effortful thinking (Cacioppo & Petty, 1982). Caligiuri (1995) reported significant relationships of this variable with both expatriate adjustment and expatriate job performance. Indeed, the fact that cultural differences may lead people in the host country workplace to behave idiosyncratically, leads us to follow Caligiuri's lead and postulate that people with a high need for cognition will likely be more curious about such differences and thus more likely to learn effective ways of coping with these cultural divergences. This may be expected to be reflected in improved job performance. It is therefore hypothesized that:

> Hypothesis 5: Need for cognition will relate positively to expatriate overall job performance.

Category width is a cognitive individual differences variable that in our opinion has received less than due attention as a predictor of expatriate job performance. According to Detweiler (1980), it refers to the amount of discrepancy tolerable to people among members of any particular category. For example, broad categorizers might call anything on four wheels a car, whereas narrow categorizers might include criteria such as whether it has an engine, brakes, headlights, etc, in their categorization process, thus reducing the number of exemplars that they include in the 'car' category. Essentially, the construct answers the question of how similar things have to be, to be called by the same name. Detweiler (1980) stated that "a narrow categorizer would be one who should be less able to adjust successfully to the cultural differences, since the observed behavior deviates from narrowly defined normal or desirable categories" (Detweiler, 1980, p. 284). On the basis of a rather small sample of 25 Peace Corps volunteers stationed in Truk, Micronesia, Detweiler concluded that

category width was a better predictor of premature assignment termination than personality variables (such as authoritarianism, ego strength, and manifest anxiety) and training staff assessment of skills, motivation language ability and adaptation that had been investigated previously. That is, he found that people with low category width were more inclined towards premature assignment termination than people with high category with. In line with Detweiler's reasoning, it was hypothesized that:

> Hypothesis 6: Category width will relate positively to expatriate overall job performance.

According to Dweck and Legget (1988), individuals' implicit theories serve to orient them towards specific goals that in turn predict their adaptive (mastery oriented) or maladaptive (helpless) behaviors. They state that "implicit beliefs about ability predict whether individuals will be oriented toward developing their ability [incremental theory] or toward documenting the adequacy of their ability [entity theory]" (Dweck & Legget, 1988, p. 263). Since implicit theories seem to be deeply rooted in motivation (Dweck & Legget, 1988), it was decided to develop an expatriate specific measure of implicit theories about cultural adaptation for the purpose of the present investigation. It was expected that expatriates who had an incremental theory of cultural adaptation, that is, who believed that one's cultural adaptation is something that can be developed, would outperform expatriates who held an entity theory of cultural adaptation. Finally, it should be noted that one's 'true' cultural adaptation is an individual differences variable that will only become manifest at the time the assignment is initiated. As such, cultural adaptation was not itself included as a predictor variable.

> Hypothesis 7: Implicit adaptability theories will relate positively to expatriate overall job performance.

4.3 Differences in predictive power of predictors

This study also set out to arrive at a parsimonious set of predictors of expatriate job performance. Long lists of possible predictors of expatriate effectiveness have been one of the most vexing issues in the expatriate management literature (cf. Sinangil & Ones, 2001). Ultimately, it is efficient for both the selection decision maker and the expatriate that the selection decision be based on a limited and clearly defined set of predictors. Little is known about how predictors of expatriate job performance operate in the presence of other predictors (see Shaffer et al., 2006 for an exception). Yet, statistical theory dictates that a predictor that shares a lot of variance with another predictor is likely to explain less unique variance in the criterion than a completely independent predictor. As such, an effort was made to include predictors that tapped into radically different construct domains. For example, items tapping into the category width construct should not be particularly strongly related to extraversion, and similarly conscientiousness should not relate particularly strongly to tolerance for uncertainty. This approach was expected to lead to a higher amount of explained variance in the job performance criterion than the amounts found in investigations using more similar predictors. This study therefore set out to identify a parsimonious set of predictors. In the pages that follow, this endeavor is explored not only with respect to overall performance but also vis-à-vis the performance subdimensions that are discussed below.

4.4 Prediction of multidimensional expatriate job performance

Knowledge of how predictors relate to specific performance subdimensions is vital to theory building and to practitioners who on the basis of a job analysis may want to place an emphasis on selection for certain particular performance behaviors as required for the expatriate position at hand. The Expatriate Performance Questionnaire, the performance measure that was employed within the present investigation, was previously constructed by the authors to sample across the full range of generic expatriate performance behaviors. Items were developed to tap into

four performance subdomains, namely 1) task performance, 2) contextual performance, 3) expatriate specific performance and 4) adaptive performance, and 21 performance facets. The first three of these dimensions closely reflect the technical, contextual and expatriate assignment-specific performance dimensions originally identified by Caligiuri and Day (2000), and the adaptive performance dimension was derived from work by Pulakos and colleagues (Pulakos, Arad, Donovan, & Plamondon, 2000; Pulakos et al., 2002). Based on a content analysis and categorization of a total of 121 critical performance incidents that were gathered from expatriates, Pulakos et al. (2000) found that a total of 24 percent of these could be classified as adaptive performance. Of these incidents 66 percent were categorized in their cultural adaptability dimension. These findings provide clear support for the inclusion of adaptive performance in a taxonomy of expatriate job performance. Please see the method section for further details.

In addition to examining the hypothesized effects of the predictor variables on expatriate overall job performance, the current study thus set out to explore how these predictors relate to expatriate job performance subdomains. For example, in line with the extant domestic literature, it could be expected that intelligence should be an especially strong predictor of task performance while the FFM factors should relate especially strongly to contextual performance (Borman & Motowidlo, 1997). Many of the more expatriate oriented predictors such as cultural flexibility, intercultural sensitivity, tolerance for ambiguity and tolerance for uncertainty may be required to bridge the cultural divide which is indicative of expatriate specific performance. For example, Tucker, Bonial and Lahti (2004) found that flexibility predicts expatriates' interaction with host country nationals. Similarly to Pulakos et al.'s finding that previous experience with adaptive work was one of the best predictors of adaptive performance with incremental validity beyond the more traditional cognitive ability and personality measures (Pulakos et al., 2002), it may be expected that adaptive performance in the expatriate context should be best predicted by previous international experience. In short, this study also set out to identify the most parsimonious models in the prediction of expatriate overall performance and the expatriate job performance subdimensions that are described in greater detail below.

4.5 Method

Participants

In total, 312 respondents with an average age of 38.7 (*SD* = 9.39) and 65.3% of whom were male completed the Expatriate Personality Characteristics Questionnaire. These respondents had been recruited by various means over a three year period, including but not limited to snowball sampling, notices on expatriate oriented internet bulletin boards, mailings sent out to purchased expatriate address lists, the human resources departments of multinational companies, articles featured on expatriate oriented websites (such as expatica.com), and at expatriate fairs and conferences. Of these 312 respondents, 122 also completed the Expatriate Performance Questionnaire which all respondents were invited to complete four and a half months after the first questionnaire. This time lag was included in the design of this study to insure that respondents had had sufficient tenure on their current assignment to reach proficient levels of job performance (cf. Harrison & Shaffer, 2005). Respondents were nationals of a total of 42 countries, from all continents, with The Netherlands (22.1%), Belgium (14.7%), the United States (13.5%), the United Kingdom (8.3%), Australia (5.8%), Canada (4.8%), Germany (4.2%), France (3.8%) accounting for 77.2% of the sample. Thus, although all continents were represented, more than half of the expatriates were from Europe. Participating expatriates were stationed in a total of 81 countries, in all continents, with the United States (21.4%), the Netherlands (13.7%), Taiwan and the United Kingdom (both 3.5%), Australia and Indonesia (both 2.9%), Canada (2.6%), Thailand (2.2%), France, Germany, Japan (all 1.9%), Egypt, South Korea, Malaysia, (all 1.6%) and Vietnam (1.3%) accounting for 64.5% of the expatriates' host countries. All other countries had frequencies of 1% or less. Nearly two thirds of expatriates were married (60.7%), followed by respondents who were never married (28.2%), respondents who were divorced (9.7%) and respondents who were widowed (1.3%). Ninety percent of the spouses of the expatriates who were married were living with their partner on assignment and 33.1% of the expatriates were living with (an average of 2) children. Of the expatriates 21.4% resided in the United States and 13.7% in The Netherlands, with less than 5% of expatriates residing in each of the remaining 79 countries of residence. Total

expatriate tenure was 12.48 years on average (*SD* = 10.00) with an average of 3.91 (*SD* = 5.01) on the current assignment.

Procedure

The study was conducted using a web based instrument. At Time 1, expatriates received an e-mail invitation with a hyperlink that directed them to the survey administration website. The e-mail informed participants of the purpose of the study, and gave details regarding confidentiality and the researchers' contact details. In order to motivate respondents USD 100.00 Dollar Amazon.com gift certificates were raffled amongst participants. Four and a half months after the administration of the Expatriate Personality Characteristics Questionnaire (EPCQ), expatriates were sent an e-mail invitation to the Expatriate Performance Questionnaire (EPQ) that was described earlier.

Measures: Control Variables

In order to avoid possible confounding effects of age and gender, it was decided to control for these variables.

Measures: Independent Variables

The web based instrument used in this study contained scales aimed at assessing the Five Factor Model (FFM) factors (extraversion, emotional stability, agreeableness, conscientiousness, and openness), local language ability, intercultural sensitivity, previous international experience, cultural flexibility, intelligence, core self evaluations, tolerance for ambiguity, tolerance for uncertainty, need for cognition, category width, and implicit cultural adaptability theories. All of these constructs, with the exception of local language ability and implicit cultural adaptability theories were adopted from the extant literature. Below, the scales are described in more detail. Note that the reliabilities given are reliabilities found in previous research; the reader is referred to Table 2 for the reliabilities that were found with the present sample. As may be observed within this table, reliabilities for all of the scales were in line with Nunnally's (1994) $\alpha = .70$ recommendation for instruments used in research (Mean $\alpha = .81$, ranging from .74 for agreeableness to .97 for local language ability).

The Five Factor Model Personality Dimensions. Items for assessing each of the Big-Five personality dimensions were obtained from the International Personality Item Pool (IPIP) (Goldberg, 1999). Ratings were provided on a five-point scale ranging from 1 (*very inaccurate*) to 5 (*very accurate*).

Extraversion (10 items; α = .86). Examples of items on the IPIP extraversion scale include "am the life of the party" (+) and "don't like to draw attention to myself" (-).

Emotional Stability (10 items; α = .86). Although IPIP uses the neuroticism label, Emotional Stability was chosen as a label for the purposes of the current study, and items were recoded accordingly. Examples of the IPIP neuroticism items are "often feel blue" (+) and "am very pleased with myself" (-).

Agreeableness (9 items; α = .77). Examples of items on the IPIP agreeableness scale include "have a good word for everyone" (+) and "suspect hidden motives in others" (-). One item, namely "Speak my mind" was removed from this scale because of a negative corrected item-total correlation. The reliability improved from α = .70 to α = .77.

Conscientiousness (10 items; α = .81). The items "am always prepared" (+) and "do just enough work to get by" (-) are examples of items on this scale.

Openness to experience (10 items; α = .82). Examples of items on the openness to experience scale are "believe in the importance of art" (+) and "avoid philosophical discussions" (-).

Local Language Ability (4 items). Local language ability was assessed by means of four drop down menus in which expatriates could indicate their host country language writing, reading, comprehension and speaking ability. These items were assessed on a six-point scale ranging from 1 (*none*) to 6 (*native*).

Intercultural sensitivity (24 items; α = .86). Expatriates' intercultural sensitivity was assessed by means of Chen and Starosta's (2000) 24 item Intercultural sensitivity Scale. Chen and Starosta define intercultural sensitivity as "an individual's ability to develop a positive emotion towards understanding and appreciating cultural differences that promotes appropriate and effective behavior in intercultural communication" (p. 5). Both "I am pretty sure of myself in interacting with people from different cultures." (+) and "I often get discouraged when I am with people from

different cultures" (-) are examples of items on the Intercultural sensitivity Scale. Items of this scale were rated on a scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*).

Previous International Experience (1 item). Previous international experience was assessed by asking respondents to indicate the countries in which they had been stationed and the amount of time in years that they had resided there. Previous international experience was calculated by summing across the years that expatriates had resided in the various countries.

Cultural Flexibility (7 items; $\alpha = .74$). Cultural Flexibility was assessed using seven positively keyed items that were constructed by Shaffer et al. (2006) and validated amongst a sample of Japanese expatriates, an example item being "learning about other cultures is interesting and fun". Shaffer et al. (2006) defined the construct as "the capacity to substitute activities enjoyed in one's home country with existing and usually distinct, activities in the host country." (p. 12). Cultural flexibility items were rated on a scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*).

Intelligence (30 items; $\alpha = .81$). The Wonderlic Quicktest (WPT-Q) was employed as a measure of intelligence for the purposes of the present investigation. This internet version of the longer 'paper and pencil' Wonderlic Personnel Test (WPT), the most valid universal predictor of job performance available (Schmidt & Hunter, 1998) was developed by Wonderlic to correlate highly with the original test. In Wonderlic's own research on this instrument, the correlation between the WPT-Q and the WPT was indeed high ($r = .77$, $p < .01$, $N = 201$) and reached near unison when corrected for unreliability in the criterion (*The Wonderlic Quicktest series of tests successfully predicts scores on the Wonderlic Personnel Test (WPT)*, 2004, March). The administration time of the WPT-Q was limited to eight minutes. An item similar to but not exactly the same as items that appear on the WPT-Q is "Assume that the first 2 statements are true. Is the final one: 1. true, 2. false, 3. not certain? The boy plays baseball. All baseball players wear hats. The boy wears a hat."

Core self-evaluations (12 items; $\alpha = .85$). Core self-evaluations were assessed by means of the Core Self Evaluations Scale (Judge et al., 2003). Judge et al. define core self-evaluations as a basic, fundamental appraisal of one's worthiness, effectiveness, and capability as a person. Example items of the Judge et al. (2003) scale are "I am

confident I get the success I deserve in life" (+) and "I do not feel in control of my success in my career" (-). Items were rated on a scale ranging from 1 (*strong disagree*) to 5 (*strongly agree*).

Tolerance for ambiguity (10 items; α = .86 for 22 item scale). Tolerance for ambiguity was assessed using a subset of 10 items that were selected from McClain's (1993) 22 item Multiple Stimulus Types Ambiguity Tolerance (MSTAT-I) scale. McClain defines tolerance for ambiguity "…as a range, from rejection to attraction, of reactions to stimuli perceived as unfamiliar, complex, dynamically uncertain, or subject to multiple conflicting interpretations" (p. 184). Examples of items that were acquired from the MSTAT-I scale are "I don't think new situations are any more threatening than familiar situations" (+) and "I try to avoid problems which don't seem to have one "best" solution". Items were rated on a scale ranging from 1 (*strongly agree*) to 7 (*strongly disagree).*

Tolerance for uncertainty (10 items; α = .94 for 27 item scale). Tolerance for uncertainty was assessed on the basis of a selection of ten items from the 27 item Intolerance for Uncertainty Scale (Buhr & Dugas, 2002) and mirrored to reflect tolerance for uncertainty. Dugas, Gosselin and Ladouceur (2000) define *intolerance* for uncertainty "as the excessive tendency of an individual to consider it unacceptable that a negative event may occur, however small the probability of its occurrence" (p. 552). Examples of items that were selected for the purposes of this study are "When I am uncertain I can't function very well" (-) and "One should always look ahead so as to avoid surprises" (-).Tolerance for uncertainty items were rated on a scale ranging from 1 (*not at all characteristic of me*) to 5 (*entirely characteristic of me*).

Need for cognition (10 items; α = .81). The items "can handle a lot of information" (+) and "try to avoid complex people" (-) are examples of items on this scale. Just like the items for the FFM personality dimensions, these items were also obtained from the International Personality Item Pool (IPIP) (Goldberg, 1999). Ratings were provided on a five-point scale ranging from 1 (*very inaccurate*) to 5 (*very accurate*).

Category width. Detweiler (1980) defines category width as "the amount of discrepancy tolerable among category members - how similar do things have to be called by the same name?" (p. 281). In order to measure this construct Detweiler (1980) constructed the Category Width Scale. On this scale, respondents are presented

nonsensical prototypical figures (see Figure 1 for a sample item) for four nonsensical categories, being “penims”, “sarkus”, “ifuns”, and “anaps”. These prototypical figures are respectively accompanied by 10, 20, 30 and 40 figures that resemble the prototypical figures to varying degrees. Respondents are instructed to indicate which of these 100 figures belong to the respective categories. Scores on this scale were computed by counting how many of the figures respondents had indicated as belonging to each of the four categories.

Implicit Cultural Adaptability Theories (7 items). Items were self-developed to assess whether expatriates believed their adaptability to other cultures was fixed (entity theory) or malleable (incremental theory). Examples of items on this scale are “You have a fixed degree of intercultural effectiveness; you can do little to change that” (entity) and “Through training people can improve their intercultural effectiveness.” (incremental). Items on this scale were rated on a rating scale ranging from 1(*strongly disagree*) to 5 (*strongly agree*) with low scores representing entity orientation and high scores representing incremental orientations. An exploratory principal components analysis was used to examine the underlying structure of the implicit cultural adaptability theories scale. Using Parallel Analyses (PA) on randomly generated data as a decision tool for factor retention (Hayton, Allen, & Scarpello, 2004), this analysis suggested a one factor solution (see Figure 2) that explained 53.9% of the variance (Initial Eigenvalue = 3.775) in implicit cultural adaptability theories. The PA mean and the PA 95th percentile Eigenvalues that are depicted in Figure 2 were calculated on the basis of 100 exploratory factor analyses that were conducted on randomly generated datasets using syntax obtained from Hayton, Allen and Scarpello (2004). The decision rule for factor retention proposed by these authors is to retain only those factors whose Eigenvalues are greater than those calculated on the basis of randomly generated data. All items had factor loadings of .56 or higher on the implicit cultural adaptability factor, with a mean loading of .73. (see Table 1).

Measures: Dependent variables

As mentioned earlier, the Expatriate Performance Questionnaire was designed by Mol et al. (2005, September) to sample across the full range of generic expatriate performance behaviors and was intended to cover four performance subdimensions,

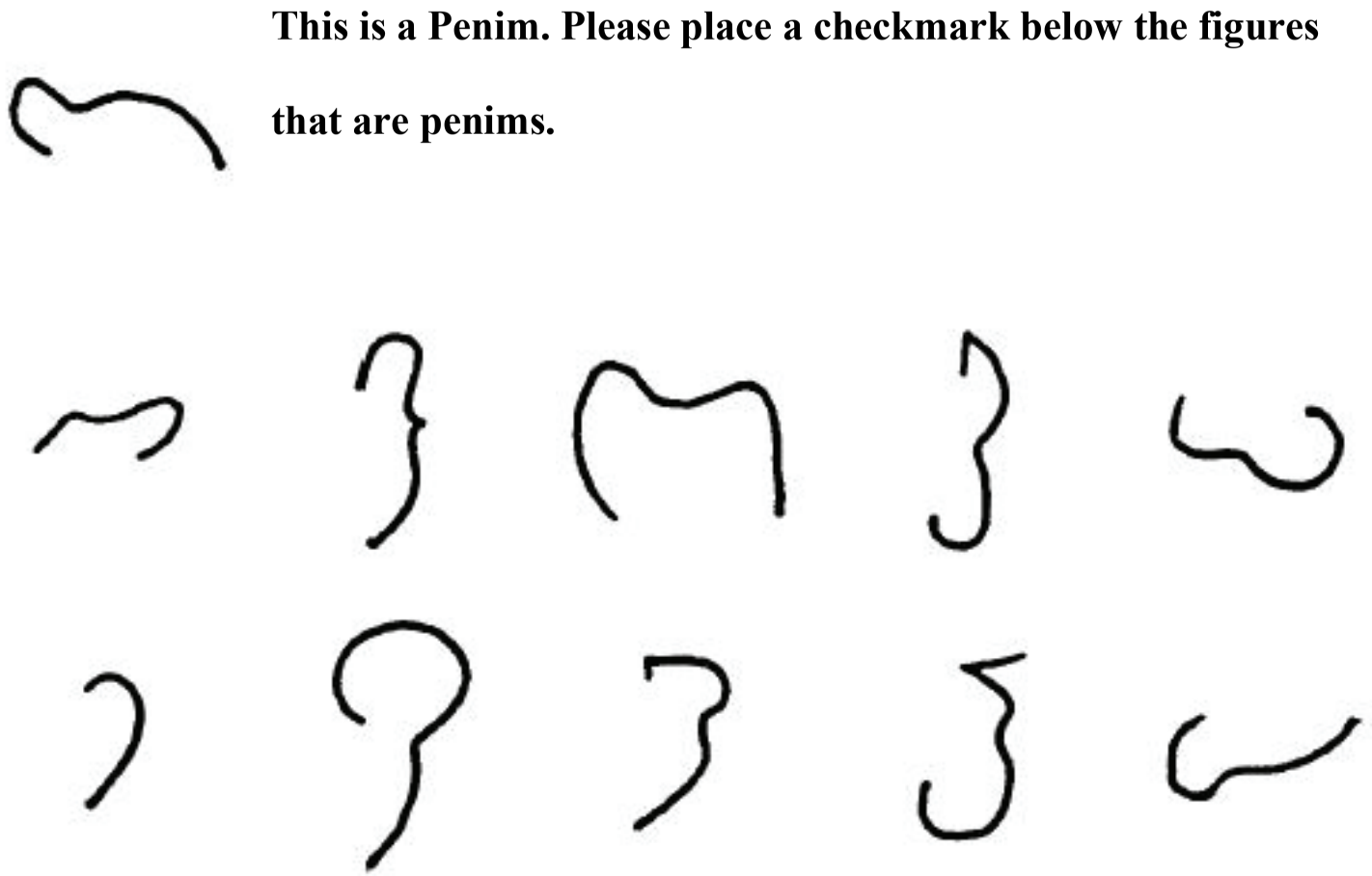
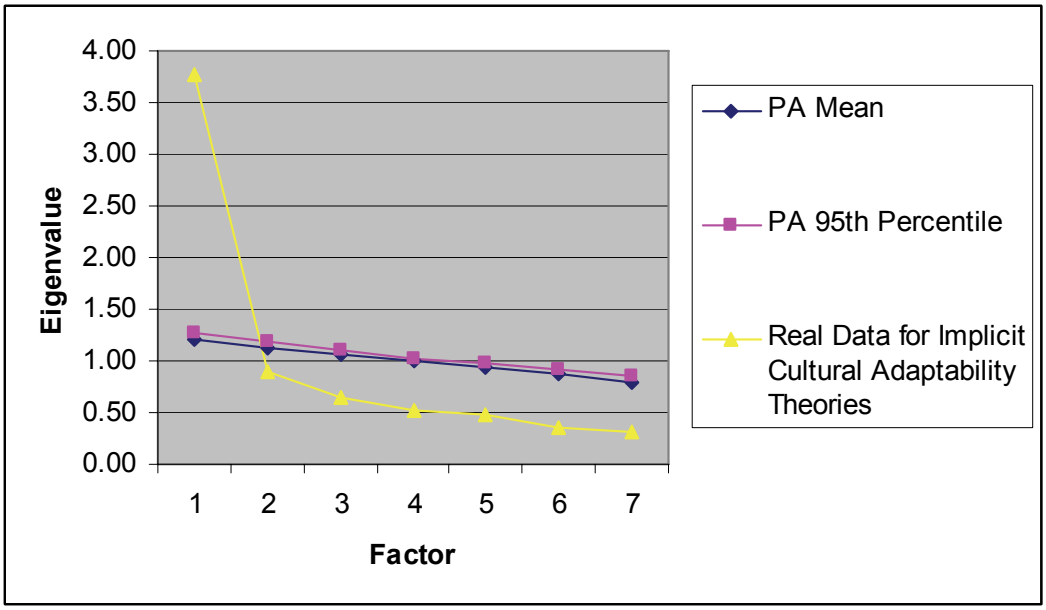


Figure 1. Example item of Detweiler's (1980) category width scale.



Note. Parallel Analysis (PA) mean and Parallel Analysis 95th percentile values were computed on the basis of parallel factor analyses conducted on 100 randomly generated datasets that corresponded to the real data in terms of sample size (n), the number of items, and the number of scale points. The decision rule for factor retention is to retain only those factors whose Eigenvalues are greater than those calculated on the basis of the random data (Hayton, Allen, & Scarpello, 2004).

Figure 2. Plot of Actual Eigenvalues for Implicit Cultural Adaptability Theories Versus Randomly Generated Eigenvalues

namely, task performance, contextual performance, adaptive performance, and expatriate-specific performance. Each of the performance subdimensions on this self-rated instrument is operationalized in one or more facets (23 in total) which were obtained from the extant domestic and expatriate literature and which are described in greater detail below. Partially on the basis of Conway (1999), the authors categorized eleven of Borman and Brush's (1993) inductively derived managerial performance mega dimensions deemed relevant to expatriates, into task and contextual performance.

The Borman and Brush dimensions labeled as task performance were 1) planning and organization, 2) technical proficiency, 3) administration and paperwork 4) decision making and problem solving and 5) collecting and interpreting

Table 1.
Item loadings for the implicit cultural adaptability factor

Analysis for Implicit Cultural Adaptability Theories	
Item 1	0.83
Item 2	0.80
Item 3	0.80
Item 4	0.74
Item 5	0.69
Item 6	0.69
Item 7	0.56
Percentage of variance explained by Factor 1 :	53.94

information. Items categorized as contextual performance were 1) communicating effectively and keeping others informed, 2) representing the organization to customers and public, 3) maintaining good working relationships, 4) persisting to reach goals, 5) organizational commitment, and 6) influencing. Borman and Brush's dimensions were complemented by items developed to reflect Pulakos and colleagues' (Pulakos et al., 2000; Pulakos et al., 2002) taxonomy of adaptive performance, namely 1) handling emergencies or crisis situations, 2) handling work stress, 3) solving problems creatively, 4) dealing with uncertainties and unpredictable work behavior, 5) learning work tasks technologies and procedures, 6) demonstrating interpersonal adaptability, 7) demonstrating cultural adaptability, and 8) demonstrating physically oriented adaptability. The expatriate specific performance dimension, finally, consisted of six items that Mol et al. (2005, September) had developed to assess performance behaviors that are specific to expatriates, such as local language proficiency and establishing effective working relationships with host nationals. Performance ratings were provided on a five-point scale ranging from 1 (*needs much improvement*) to 5 (*excellent*).

Again employing Parallel Analysis (PA) on randomly generated data as a decision tool for factor retention (Hayton et al., 2004), this analysis suggested a four factor solution (see Figure 3) that explained 39.6% of the variance (Initial Eigenvalue = 38.13) in expatriate job performance. Here too, the PA mean and the PA 95th percentile Eigenvalues were calculated on the basis of 100 exploratory factor analyses that were conducted on randomly generated datasets. Two of the four dimensions, namely task performance and adaptive performance closely reflected the previously

mentioned subdomains. Items written to reflect contextual performance and expatriate specific performance loaded on a single factor, however, which was named interpersonal communication skills and diplomacy. A fourth dimension which was named strategic planning and decision making emerged as the fourth and final factor. Item loadings on the four factors ranged from .30 to .88. Items that loaded on each of the factors were averaged in order to compute respondent's scores on each of the performance dimensions.

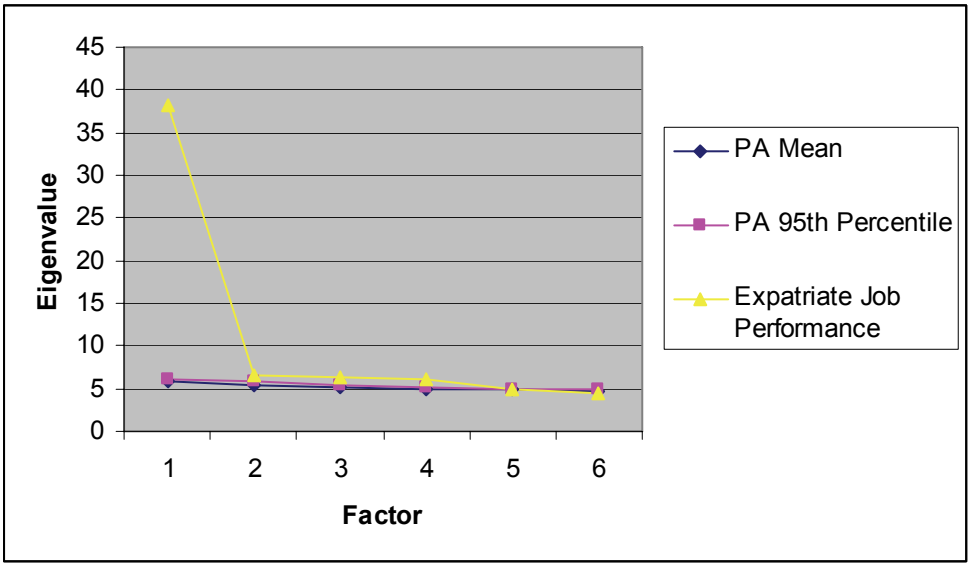


Figure 3. Plot of Actual Eigenvalues for Expatriate Job Performance Versus Randomly Generated Eigenvalues

Although performance subdimension intercorrelations (see Table 2-above the diagonal) were quite high, ranging from $r_{xx`} = .60$ to $r_{xx`} = .67$, the reliabilities of the differences between the performance subdimensions ranging from $r(X_1\text{-}X_2)(X_1\text{-}X_2)` = .72$ to $r(X_1\text{-}X_2)(X_1\text{-}X_2)` = .79$ were deemed sufficiently high to warrant investigations of the effects of the predictor variables onto the standalone performance subdimensions (see Table 2-below the diagonal).

Overall performance (144 items). Scores on overall performance were computed by averaging across the full range of performance items that were described in the introduction (including the items that did not load on the four factors that are described below). An example of an item unique to this scale is "Being open to negative or developmental feedback about work".

Task performance (31 items). Items that loaded strongly on this factor were "handling paperwork requirements" and "record keeping".

Strategic planning and decision making (20 items). Examples of items that loaded highly on this factor were "generating innovative ideas in complex areas" and "Formulating long-range plans in response to anticipated economic, technological or marketing trends".

Adaptive performance (21 items). High loading items on this factor were "adjusting priorities effectively to deal with changing situations" and "adjusting to new work processes and procedures".

Interpersonal communication skills and diplomacy (14 items). Examples of items that loaded highly on this factor were "communicating accurately" and "giving loyal constructive criticisms of organizational goals, policies and practices".

4.6 Results

Descriptives

Table 2 presents the number of items per scale, scale means, standard deviations, reliabilities and intercorrelations of the independent and dependent variables included in this study. Reliabilities of the differences between the four performance dimensions that were also computed and are reported below the diagonal are sufficiently high to warrant independent investigations of how they relate to the predictors that were included in this investigation. The discussion of the results that follows is organized along the lines of the four goals of the present investigation that were mentioned within the introduction, namely whether a) the Mol et al. meta-analytic findings could be replicated in a single empirical study; b) additional predictors that have not previously been investigated relate to expatriate job performance; c) there are differences in predictive power of a predictor in light of a large set of predictors of expatriate job performance and d) how specific predictors relate to specific performance subdomains.

Replicating the Mol et al. (2005) findings

The first goal of the present investigation was to replicate the Mol et al. meta-analytic findings in a single empirical study. An examination of the univariate relationships (i.e., the correlations in Table 2) between each of the predictor variables and expatriate overall performance, provides 'standalone' support for hypotheses 1a-g and 1i, respectively pertaining to the predictive validity of extraversion (r = .37, p < .01, n = 104), emotional stability (r = .44, p < .01, n = 104), agreeableness (r = .33, p < .01, n = 104), conscientiousness (r = .51, p < .01, n = 104), openness (r = .41, p < .01, n = 104), local language ability (r = .25, p < .05, n = 87), intercultural sensitivity (r = .30, p < .01, n = 105), and cultural flexibility (r = .38, p < .01, n = 105). No support, however, was found for the hypothesized relationship between previous international experience (r = .07*, ns.,* n = 100) and expatriate job performance. Since Mol et al. did not find support for the predictive validity of previous international experience either, the only difference between their meta-analytic findings and our empirical findings appear to be that we found support for the predictive validity of openness on expatriate job performance. Thus in summary, the Mol et al. findings were clearly replicated within the current study, and where our findings differed from the Mol et al. findings, they were more supportive of the predictability of expatriate job performance.

In an attempt to improve upon the accuracy and robustness of the Mol et al. (2005) estimated population effect sizes, it was decided to obtain their datasets and to update their meta-analytic findings with the findings of the current study. Results of these expanded meta-analyses are presented in Table 3.

Column two through seven respectively contain the total sample size, K (i.e., the number of correlation coefficients on which each analysis was based), the observed population effect size (sample weighted mean r), the estimated true population effect size after correction for attenuation (ρ), the estimated true residual standard deviation ($SD\rho$), the lower bound of the 95% confidence interval, the lower bound of the 95% credibility interval, and the results for the employed decision rule for homogeneity ($SD\rho < ¼\rho$). In those cases where the data were homogeneous (indicated by 'yes' in column 7), a homogeneous confidence interval was calculated and vice versa (please

Table 2.

Descriptive statistics and intercorrelations for the control variables, individual difference variables and the performance dimensions.

			M	*SD*	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Cont.	1	Age	38.68	9.39	(-)	-.29**	.00	.14*	.11	.09	-.06	-.19**	.15*	.63**	.19**	-.03	.12*	.04	.09	-.08	-.07	.12*	.04	-.01	.09	-.03	.10
	2	Gender (1=male; 2=female)	(-)	(-)		(-)	.07	-.14*	.21**	-.01	.13*	.00	.01	-.26**	-.08	.03	-.05	-.02	.06	.01	.00	.00	-.18	-.02	-.28**	-.13	-.18
FFM	3	Extraversion	3.75	0.64			(.85)	.27**	.22**	.35**	.29**	-.03	.36**	.02	.25**	-.15*	.35**	-.35**	.22**	.23**	.07	.02	.37**	.25*	.40**	.32**	.44**
	4	Emotional Stability	3.85	0.64				(.82)	.40**	.44**	.05	-.03	.25**	.19**	.29**	.14*	.69**	-.31**	.39**	.23**	.07	.15*	.44**	.40**	.32**	.40**	.45**
	5	Agreeableness	4.07	0.49					(.74)	.23**	.22**	-.02	.36**	.07	.27**	.14	.28**	-.22**	.20**	.10	.01	.24**	.33**	.34**	.16	.36**	.36**
	6	Conscientiousness	4.05	0.54						(.80)	.19**	.05	.32**	.11	.21**	-.10	.50**	-.18**	.11	.28**	.04	.12*	.51**	.56**	.48**	.35**	.34**
	7	Openness	4.01	0.56							(.75)	.09	.37**	-.05	.28**	.10	.11	-.43**	.13*	.54**	.13*	.26**	.41**	.35**	.35**	.46**	.29**
Expatriate	8	Local Language Ability	3.37	1.65								(.98)	.04	-.10	.18*	-.18*	.02	-.08	-.11	.05	.04	-.12	.25*	.28*	.10	.32**	.18
	9	Intercultural Sensitivity	4.31	0.37									(.89)	.13	.53**	.10	.36**	-.37**	.27**	.31**	.11	.32**	.30**	.28**	.21*	.38**	.27*
	10	Expatriate Tenure	3.91	5.01										(-)	.19**	.10	.12*	-.01	.11	.02	-.12*	.10	.07	.02	.08	.03	.13
	11	Cultural Flexibility	4.27	0.46											(.74)	.03	.32**	-.41**	.24**	.30**	.05	.27**	.38**	.34**	.26*	.38**	.35**
Alternate Predictors	12	Intelligence	24.94	4.88												(-)	.11	-.07	.14*	.25**	.19*	.05	-.04	-.08	-.05	-.04	.12
	13	Core Self Evaluations	3.77	0.54													(.84)	-.38**	.44**	.37**	.11	.12*	.40**	.41**	.30**	.33**	.38**
	14	Tolerance for Ambiguity	3.01	0.80														(.75)	.44**	.51**	.16*	.24**	.33**	.22*	.30**	.37**	.30**
	15	Tolerance for Uncertainty	3.67	0.55															(.81)	.31**	.03	.15*	.18	.13	.08	.28**	.18
	16	Need for Cognition	4.07	0.59																(.77)	.10	.20**	.41**	.29**	.32**	.47**	.41**
	17	Category Width	19.14	10.92																	(-)	.12*	-.02	-.02	-.07	-.01	.06
	18	Implicit Adaptability Theories	4.03	0.60																		(.85)	.05	.04	.02	.10	-.03
Performance	19	Overall Performance	3.80	0.40																			(.97)	.89**	.83**	.85**	.81**
	20	Task Performance	3.73	0.50																				(.93)	.62**	.66**	.62**
	21	Strat. Plan. & Dec. Making	3.69	0.47																				.79	(.92)	.63**	.60**
	22	Adaptive Performance	3.97	0.42																				.74	.72	(.88)	.67**
	23	Interpers. Com. & Diplomacy	3.84	0.49																				.74	.73	.74	(.87)

Note. Coefficient alphas indicating estimated reliabilities are reported in parentheses on the diagonal. Sample sizes for the predictors range from 162 to 316 with a median of 299. Sample sizes for the performance dimensions range from 78 to 122 with a median of 104. Reliabilities of the differences for the performance subdimensions are reported below the diagonal.

* $p < .05$. ** $p < .01$

A meta-analytic update

Table 3. Meta-Analytic Results for the Effects on Expatriate Job Performance

	Total *N*	*K*	Sample weighted mean *r*	*ρ*	*SDρ*	95% Confidence interval lower	95% Credibility interval lower	*SDρ* < ¼*ρ*
Big Five Dimensions								
Extraversion	1218	13	.16	.20	.09	.10	.01	No
Emotional Stability	1293	13	.12	.13	.14	.04	-.15	No
Agreeableness	1125	12	.11	.14	.11	.04	-.08	No
Conscientiousness	1127	12	.17	.21	.12	.12	-.02	No
Openness	1145	12	.08	.10	.16	.00	-.21	No
Context Specific Predictors								
Local Language Ability	583	6	.17	.20	.10	.06	-.01	No
Cultural Sensitivity[1]	444	5	.25	.30	.00	.16	.30	Yes
Prior International Experience	1038	7	.02	.02	.19	-.07	-.34	No
Cultural Flexibility	485	3	.25	.29	.00	.12	.29	No
Biographic/Control variables								
Gender (1 = Male; 2 = Female)	796	6	-.01	-.02	.01	-.08	-.03	No
Age[1]	593	4	.04	.04	.00	-.04	.04	Yes

[1] These credibility intervals were based on a residual standard deviation of zero (the residual variance estimate for these cases was negative).

refer to the Chapter 2 for full details). As mentioned earlier, the original meta-analysis provided support for the predictability of expatriate job performance on the basis of all of the FFM dimensions (see hypothesis 1a-d) with the exception of openness. Interestingly, the addition of our findings actually increased the estimated sample

weighted mean correlations and the estimated true population effect sizes by approximately .03 correlation points for each of the FFM dimensions. Although the practical significance of this limited, it turned out that it caused the effect for openness to reach statistical significance (it had been marginally significant in the original study). In addition to these findings, the revised meta-analysis also provides continued support for the predictability of expatriate job performance on the basis of local language ability (1f), intercultural sensitivity (1g) and cultural flexibility (1i). No support was found for previous international experience (1h) as a predictor of expatriate job performance. It must be noted that all of these findings were heterogeneous pointing to moderation.

Examining univariate findings of additional predictors that have seldom been investigated in relation to expatriate job performance

With regard to the alternative predictors of expatriate job performance that were included in the present investigation, it emerged that core self evaluations (3), tolerance for ambiguity (4a), and need for cognition (5) demonstrated moderate and significant correlations with expatriate overall job performance (see Table 2) thus providing support for the univariate relationships between these predictors and expatriate job performance. Intelligence (2), tolerance for uncertainty (4b), category width (6), and implicit cultural adaptability theories (7) were not significantly related to overall performance. It thus appears that some, but not all of the alternative predictors can explain variance in the expatriate job performance criterion.

Differences in predictive power of a predictor in light of a large set of predictors in explaining variance in expatriate overall performance and the four expatriate performance subdimensions

Above, it was shown that most (i.e., 11/16) of the predictors included in this investigation were significantly related to expatriate job performance when viewed in isolation, with the exception of previous international experience, intelligence, tolerance for uncertainty, category width, and implicit cultural adaptability theories. Yet, from the multiple regression analyses onto overall performance and the regression analyses onto the four performance subdimensions that were carried out, a

much more subtle (and parsimonious) picture emerges. Results for these analyses were controlled for the effects of age and gender, and are reported in Table 4. The control variables age and gender explained an average of 3.3% of the variance in expatriate overall performance and the four performance subdimensions (ranging from .1% for task performance to 7.7% for strategic planning and decision making). As may be concluded from Table 4, an average of 55% of the variability in the performance dimensions could be accounted for by the predictors and all prediction models were highly significant ($p < .01$). These findings lend further support to the predictability of expatriate job performance. Adaptive performance was the performance dimension that was best predicted by the predictors included in this investigation. Interestingly, across the performance dimensions very few of the predictor variables reached statistical significance when they had to compete with other predictors in the various multiple regression analyses. Across the four performance subdimensions and overall performance, it appears that four of the FFM dimensions, namely conscientiousness, openness, agreeableness and to a lesser extent extraversion, were responsible for most of the explained criterion variance, with most of the other significant univariate effects being shrouded. Specifically, conscientiousness and openness emerged as significant predictors of both overall performance and task performance. Conscientiousness was also the only predictor to reach significance in the prediction of strategic planning and decision making. Agreeableness, openness, local language ability and need for cognition were significant predictors of adaptive performance, and extraversion, agreeableness and need for cognition attained statistical significance in the prediction of interpersonal communication skills. It is surprising that despite its consistent and moderately high correlations with overall performance and the four performance subdimensions, emotional stability did not reach significance in any of the regression models. Another unexpected finding is that the control variable gender emerged as a significant predictor of all expatriate performance dimensions except task performance, with women consistently scoring lower on self-rated performance than men. This finding is not reflective of the univariate effects reported in Table 2 where it was found that only the effect of gender on strategic planning and decision making was significant ($r = -.28$, $p < .05$, n = 106). It thus appears that this finding may be specific to this study, especially when viewed in light of the meta-analytic update presented in Table 3. That

is, this effect did not endure when combined with the effects of previous studies that examined the relationship between gender and expatriate job performance.

Table 4.
Regression analyses of the individual differences predictors on overall perfomance, and the four performance factors.

	Criterion				
	Overall performance	Task performance	Strategic planning and decision making	Adaptive performance	Interpersonal com. skills and diplomacy
	$\hat{\beta}$	$\hat{\beta}$	$\hat{\beta}$	$\hat{\beta}$	$\hat{\beta}$
Control variables					
Age	-.02	-.06	.05	-.07	.07
Gender (1 = M; 2 = F)	-.24*	-.08	-.32**	-.21*	-.22*
Predictors					
Extraversion	.11	-.05	.23	.06	.32**
Emotional Stability	.17	.13	.08	.25	.20
Agreeableness	.20	.20	.05	.23*	.27*
Conscientiousness	.28*	.38**	.35**	.08	.05
Openness	.25*	.27*	.24	.25*	.06
Local Language Ability	.18	.18	.05	.26*	.17
Intercultural Sensitivity	-.08	-.06	-.12	.08	-.10
Expatriate Tenure	-.04	-.03	-.08	-.02	-.02
Cultural Flexibility	.13	.15	.07	.05	.12
Intelligence	-.04	-.09	.05	-.12	.10
Core Self Evaluations	-.02	.09	-.05	-.15	-.06
Tolerance for Ambiguity	.02	.09	-.11	.08	.06
Tolerance for Uncertainty	.01	.01	-.07	.15	-.03
Need for Cognition	.15	.02	.05	.27*	.29*
Category Width	-.08	-.06	-.15	-.07	.01
Implicit Cultural Adaptability Theories	-.13	-.12	-.09	-.10	-.18
ΔR^2	.58**	.53**	.50**	.60**	.54**
Adjusted ΔR^2	.46**	.39**	.34**	.47**	.40**
F	4.56**	3.70**	3.22**	4.81**	3.85**
df	18	18	18	18	18

Missing values were exluded on a pairwise basis due to differing numbers of missing values across variables. Valid sample sizes ranged from 78 for intelligence to 107 for need for cognition (M=102)
* p<.05. ** p<.01.

4.7 Discussion

The current study was carried out with four goals in mind. First it was examined whether the findings that were reported in a recent meta-analysis on the

selection context predictors of expatriate job performance (Mol, Born, Van Der Molen et al., 2005) could be replicated in a single empirical study. Based on an examination of the standalone effects (i.e. correlations) of the predictors with expatriate overall performance, it was concluded that all of the hypotheses which were adapted from the meta-analysis were clearly supported, with the exception of the hypothesized relationship between previous international experience (1h) and expatriate job performance. It appears then, that internationally tenured expatriates perform no better than expatriates who are on their first assignment. This finding is consistent with Mol et al. (2005). The hypotheses relating to the relationships with expatriate job performance of all the FFM dimensions-extraversion (1a), emotional stability (1b), agreeableness (1c), conscientiousness (1d), and openness (1e) - and the expatriate specific predictors -local language ability (1f), intercultural sensitivity (1g), and cultural flexibility (1i) were supported when examined in isolation from the other predictors that were included in this investigation. Although the findings for extraversion, emotional stability, agreeableness and conscientiousness are in line with both expatriate oriented (Mol, Born, Van Der Molen et al., 2005) and domestically oriented meta-analyses, the finding for the relationship between openness and expatriate job performance is new and seems to be specific to expatriates (as opposed to domestic employees). It is interesting to note in this regard that Caliguiri, Jacobs and Farr (2000) have developed the Attitudinal and Behavioral Openness Scale (ABOS) to specifically assess the openness construct for purposes of predicting expatriate outcomes, such as cross cultural adjustment. Current findings suggest that future research might find the ABOS to relate to expatriate job performance as well.

The second goal of this study was to examine a number of potential predictors of expatriate job performance that have seldom or never been studied in a validation study. Such predictors included within the present investigation were intelligence, core self evaluations, tolerance for ambiguity, tolerance for uncertainty, need for cognition, category width, and implicit cultural adaptability theories. Although support was found for the predictability of expatriate job performance on the basis of core self evaluations (3), tolerance for ambiguity (4a) and need for cognition (5), no support was found for the univariate (i.e., correlational) relationships between intelligence (2), tolerance for uncertainty (4b), category width (6), and implicit cultural adaptability theories (7) and expatriate job performance. The non-existent

correlation between intelligence and expatriate job performance is especially unexpected, since this construct has received such strong support in the domestic literature (see for example Robertson & Smith, 2001). Range restriction may provide an explanation for the present finding (the idea being that this study only included expatriates who may have already been chosen for their high levels of intelligence). Yet, a comparison of the variance of our findings with those reported in *The Wonderlic Quicktest series of tests successfully predicts scores on the Wonderlic Personnel Test (WPT)* (2004, March), revealed no difference and sheds doubt on this explanation. However, the means of the expatriate sample did indeed appear significantly higher than those reported in the Wonderlic report. An explanation for the finding that general mental ability is unrelated to expatriate job performance may be found in this high average. Perhaps it is the case that after a certain level of general mental ability is reached the true predictive validity drops to zero which would point to heteroscedasticity. The fact that tolerance for ambiguity was related to expatriate job performance and tolerance for uncertainty was not, is somewhat surprising due to the conceptual similarity of these constructs. However, the fact that the correlation between these constructs was not extremely high (see Table 2), provides support that they do assess different parts of the predictor space for expatriates. An examination of the items on each of the scales, revealed that the uncertainty items were more coping-oriented and had more to do with strong emotional reactions to uncertainty (e.g., “My mind can't be relaxed if I don't know what will happen tomorrow”), while the tolerance for ambiguity items were more situation-oriented and emphasized the fulfillment that might result from dealing with ambiguity (e.g. “I'm drawn to situations which can be interpreted in more than one way”). The findings for category width may well be explained by their low face validity (see Figure 1). Respondents might well have interpreted the purpose of this scale differently; as one respondent with whom we conversed about the questionnaire indicated that he actually suspected that this scale was some sort of measure of intelligence. Such issues with face validity and respondents’ differential interpretation of what was being expected of them may well have introduced a high amount of error variance in assessing this construct, veiling any true variance. Unfortunately it was impossible to calculate an index of reliability for this scale due to the way it was formatted. The non-finding for implicit cultural adaptability theories finally may be attributed to range restriction, in the sense that all on the job expatriates must have had the idea that they could learn to adapt to

other cultures, otherwise they would not have accepted the assignment. An examination of the standard deviation and the mean for implicit cultural adaptability theories suggests that this may indeed be the case. Unfortunately, because the scale was self-constructed we were unable to examine this issue any further. Future research using expatriate job applicants might be more successful in predicting performance on the basis of implicit cultural adaptability theories.

The third goal of this study was to examine how predictors would relate to expatriate overall performance when they had to compete with all of the other predictors that were included in this investigation. On the basis of a multiple regression analysis it was found that conscientiousness and openness were the only predictors of expatriate overall job performance. Although the finding for conscientiousness is unsurprising when in light of the domestic evidence pertaining to the relationship between this personality factor and expatriate job performance (Robertson & Smith, 2001), the finding for openness is remarkable. It appears that openness and conscientiousness are variables that should be included in developing a parsimonious expatriate job performance prediction model. The fact that some of the lowest standard deviations were found for the expatriate specific predictors (namely intercultural sensitivity and cultural flexibility) suggest that the range of these variables may have been restricted by self-selection. Indeed, many of these variables seem to correspond closely to 'lay' perceptions of the qualities that are needed by expatriates and as such it is possible that people who scored lower on these variables have decided not to choose for an international assignment. An alternative explanation for the finding that the expatriate-specific predictors perform less well in the regression model, may be that these variables are susceptible to social desirability, an explanation that is supported by the relatively high means of these variables. We will return to this topic after discussing the multivariate effects on the other performance dimensions.

The fourth goal of this investigation was to examine the prediction of multidimensional expatriate job performance. For this purpose a four dimensional performance instrument was employed, consisting of task performance, strategic planning and decision making, adaptive performance and interpersonal communication skills and diplomacy. Although these dimensions were significantly correlated, a consideration of the factor structure together with a consideration of the

reliabilities of the differences supported the notion that these dimensions were independent enough for separate meaningful regression analyses to be carried out. An unexpected finding within the current investigation was that the control variable gender was significantly related to all of the performance dimensions in the regression analyses with the exception of task performance. However, the fact that the meta-analytic update did not result in a significant effect for gender onto expatriate overall performance, casts some doubt on this finding. It thus seems that this finding may be attributed to sampling error or difference in response styles for males and females. With regards to the latter, Fletcher on the basis of a literature review has concluded that women are less likely than men to overestimate their performance and more likely than men to rate themselves lower than men (Fletcher, 1999).

While both conscientiousness and openness emerged as significant predictors of task performance, conscientiousness was the only predictor to relate significantly to strategic planning and decision making in the regression analysis for this performance dimension. Adaptive performance was significantly predicted by agreeableness, openness, local language ability and need for cognition, while interpersonal communication skills finally, were significantly predicted by extraversion, agreeableness and need for cognition. The fact that task performance was significantly predicted by conscientiousness is hardly surprising when considering the fact that conscientious people are perfectionist, organized, driven, concentrated and methodical (Howard & Howard, 2001). On a conceptual level these characteristics also seem to have more in common with the task performance and strategic planning dimensions than with adaptive performance and interpersonal communication skills and diplomacy. The fact that openness is related to task performance is somewhat more unexpected when viewed in light of the domestic literature relating to this issue. However, it is possible that the intercultural context in which task performance is carried out is salient here, requiring of the expatriate characteristics such as imagination, complexity seeking, acceptance of change and a helicopter view that are encompassed by the openness construct (Howard & Howard, 2001).

On the basis of a consideration of the beta-weights it appears that across the performance dimensions, the FFM is most effective in explaining criterion variance. Although the findings for conscientiousness are in line with domestic research into the relationship between the FFM and job performance our findings for openness are not.

Barrick and Mount (1991) in their domestic meta-analysis of predictors of expatriate job performance, for example, found that openness was not related to job performance, but that it did predict training proficiency. On the basis of these findings Barrick and Mount suggested that people who score high on openness may be more willing to engage in learning experiences. Our findings for openness suggest such willingness to learn may be especially important for expatriates, who often need to acquire new knowledge, skills and abilities upon arriving in the host country before they can start fulfilling their full potential. The fact that the FFM appeared to cloud any criterion variance explained by the alternative predictors, even though most of these predictors had significant univariate relationships with expatriate job performance, suggests that the FFM may be a necessary and sufficient framework in the prediction of expatriate job performance. In this regard it is striking that the core self-evaluations construct, which is supposed to be broader than emotional stability did not perform any better in the regression analyses that were conducted. This finding contrasts with domestic findings reported by Judge et al. (2003) who showed that core self-evaluations had incremental validity beyond the FFM dimensions. In the expatriate context, it appears then that the FFM dimensions are not referred to as the 'Big Five' without reason and that the FFM are able to account for the same criterion variance that the alternative predictors account for.

Limitations and suggestions for further research

An important limitation of the present investigation was the rather limited sample size (i.e., $N = 122$) on the performance questionnaire. Unfortunately this meant that several subgroup analyses could not be conducted, due to a lack of power. For example, it would have been interesting to conduct subgroup analyses for nationality, host country, managerial level, and occupation. Possibly, different patterns would emerge across these subgroups.

A second and related limitation of the present investigation was the fact that Dutch and to a lesser extent American expatriates appeared to be overrepresented as opposed to expatriates of other nationalities. However, the fact that more than 50% of the sample consisted of European expatriates in our view provides a welcome departure from the heavy emphasis that American expatriates have received in

previous research on selection context predictors of expatriate job performance. Future research should endeavor, however, to replicate these findings with samples of expatriates from other countries, such as Japan, China or Australia for example.

A final limitation of this investigation was that it relied on self-ratings of job performance. Although an effort was made to collect peer and supervisor ratings as well, by requesting the expatriate to volunteer the e-mail address of one or more of his or her close coworkers or that of his or her supervisor, too few expatriates opted in to this part of the research for any meaningful analyses to be carried out. This is unfortunate, since it means that the results here might have been affected by common-method variance. For instance, it is not unlikely that respondents with low core self evaluations might tend to give lower performance self-ratings than respondents with high core self evaluations. Future research might benefit by getting organizations rather than individual expatriates to endorse the research, so that supervisors and peers may be more easily approached.

Chapter 5

When Selection Ratios are High: Predicting the Expatriation Willingness of Prospective Domestic Entry-Level Job Applicants*

High expatriate selection ratios thwart the ability of multinational organizations to select expatriates. Reducing the selection ratio may be accomplished by selecting those applicants for entry level domestic positions who have expatriate aspirations. Regression analyses conducted on data from a sample of 299 Dutch students about to enter the job market, indicated that 20 predictors subsumed under the Five Factor Model (FFM), core self-evaluations, expatriate specific predictors, and biodata account for 50% of the variance in expatriation willingness. The predictors were ordered relative to their increasing alignment with expatriation willingness in terms of the action, target, context, and time elements reflected in Ajzen's (1988; 1991) principle of correspondence. Dominance and relative weights analysis provided strong support for the hypothesis that greater alignment on these elements translates into greater predictive power, with biodata emerging as the most powerful predictor set, followed by expatriate specific predictors, the FFM, and finally, core self-evaluations.

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* The corresponding reference is: Mol, S.T., Born, M. Ph., Willemsen, M.E., Van Der Molen, H.T. & Derous, E. (in press). When Selection Ratios are High: Predicting the Expatriation Willingness of Prospective Domestic Entry-Level Job Applicants. *Human Performance.*

5.1 Introduction

Recently, a meta-analysis of predictors of expatriate job performance ($K = 30$, $N = 4046$) demonstrated that the Five Factor Model (FFM) has validity in predicting expatriate job performance (Mol, Born, Willemsen, & Van Der Molen, 2005). This investigation demonstrated that expatriate selection, at least as far as the Big Five personality dimensions are concerned, is remarkably similar to domestic selection. In addition the meta-analysis also provided support for two predictors specific to expatriates, namely cultural sensitivity and host country language ability.

The identification of valid predictors of expatriate job performance is necessary, but not sufficient to ensure that companies will be able to select those expatriates that will perform well. A major concern that remains to be addressed is that expatriate applicants may be increasingly difficult to find, thereby limiting the utility of expatriate selection. That is, as the selection ratio (i.e. the ratio of the number of persons hired to the number of available applicants) approaches one, and (nearly) every candidate is hired, the ability to discriminate between suitable and unsuitable candidates becomes useless (cf. Taylor & Russell, 1939). According to Selmer (2001), currently expatriate selection is more about finding anyone willing to do the job rather than selecting the best candidate. Aryee, Chay, and Chew (1996) argue that the fact that research has focused on the selection and adjustment as opposed to receptivity to expatriation "is a case of putting the cart before the horse" (p. 267). More recently, Konapaske and Werner (2005) have pointed to the terrorist attacks of September 11, as a reason for potential assignees to be less than willing to travel and take on an expatriate assignment. For the above reasons, the current investigation examines the expatriation willingness of prospective job market entrants.

Sinangil and Ones (2001) state that expatriation may be seen as a placement rather than as a selection decision because candidates for expatriate assignments are often already employed by the organization. Based on their study of nine multinational organizations, Harris and Brewster (1999) coined the 'coffee machine system of international selection' to characterize the way in which expatriate placement is carried out in practice. Within this system, the home company employee is first selected informally (i.e., at the coffee machine), after which the organization's formal processes are employed for the sole purpose of justifying the decision. The

coffee-machine system is a closed system and will restrict the candidate pool because "…it is limited to those subordinates well known to the selector and the other managers with whom they come into contact" (Harris & Brewster, 1999, p. 498).

With individual expatriate assignments cited as costing between 300.000 and 1 million dollars annually (Black & Gregersen, 1999), there is a case for finding candidates that will perform effectively. It is therefore critically important to obtain an adequately sized and qualified candidate pool. Yet, in practice, the unworkably high expatriate selection ratio is the major bottleneck in the low prevalence of expatriate selection. At first sight, there are few options to organizations to increase the candidate pool. However, the fact that 83% of expatriated employees originate from within the organization (*Global Relocation Trends 2003/2004 Survey Report*, 2004) indicates that for many of these employees the organization at one time *was* in a position to make the hiring decision, namely upon their organizational entry. Simply moving the expatriate selection decision to the point where candidates apply for a domestic position, however, is not sufficient to ensure an adequately sized expatriate candidate pool. This is because many candidates who would be selected based on the prediction that they would perform in both their domestic and expatriate positions might be very unwilling to embark on an expatriate assignment. In this sense, and minding the fact that valid predictors of expatiate job performance are available, *unwillingness* may be perceived as a constraint on the utility of expatriate selection (Borstorff, Harris, Feild, & Giles, 1997). Expatriation willingness is defined here as the likelihood of accepting a job offer that requires living and working in a foreign country for a temporary period.

Van Vianen, De Pater and Caligiuri (2005) have pointed out that multinational organizations now use employee self-selection in order to encourage self-assessment among those who have not previously considered an expatriate assignment. Although new candidates for expatriate assignments may be identified in this manner, it can be argued that greater numbers of such candidates could be obtained from the pool of applicants that apply for domestic entry-level jobs. Therefore, this study set out to examine whether individual differences measures geared towards the prediction of expatriate job performance, may also show promise for predicting future expatriation willingness at the time candidates apply for a domestic entry-level position.

Research by the Conference Board indicated that 68% of 128 expatriate human resource directors expressed that managers within their company had general

doubts about the value of expatriate assignments to their own careers (Weeks, 1993). Only 29% of these human resource directors indicated that managers within their company wholeheartedly accepted the necessity of international assignments to their careers. Many companies attempted to gauge the employees' willingness to relocate internationally at an early point in their career, with repercussions for objecting to expatriation that ranged from advising the employee to seek a career elsewhere to disqualification from fast-track consideration (Weeks, 1993). Such serious consequences to expatriation refusal may entice domestic candidates who are unwilling to relocate internationally to feign their willingness. Indeed, these candidates have little vested interest in informing the organization of their unwillingness when they are focused on being hired for a domestic position and an international assignment may be several years away. Therefore, organizations would profit from the ability to predict the expatriation willingness of their applicants, since this would increase the scope of the selection decision. The question then becomes which individual difference variables predict expatriation willingness? Especially individual differences predictors of willingness that are verifiable, such as biodata for example, might alleviate the aforementioned issue of candidates feigning their willingness. Before presenting our hypotheses vis-à-vis the above question, we will first define the willingness construct.

Expatriation willingness may be thought of as an intention to engage in a particular behavior, namely the acceptance of an expatriate assignment offer. In a longitudinal study, Brett and Reilly (1988) report a medium correlation ($r = .32$, $p < .01$, $n = 79$) between domestic relocation willingness and offer acceptance or rejection up to five years later. Both the Theory of Reasoned Action (Ajzen & Fishbein, 1977; Fishbein & Ajzen, 1975) and its successor, the Theory of Planned Behavior (Ajzen, 1988; 1991), focus on maximizing intention-behavior relationships. The principle of compatibility (Ajzen & Fishbein, 1977; Fishbein & Ajzen, 1975) and its successor, the principle of correspondence (Ajzen, 1988; 1991) dictate that an intention-behavior relation is optimized by matching the intention and the behavioral criterion with respect to the specificity of action, target, context and time elements. Below, the expatriation willingness construct will be discussed in light of each of these elements. This will be followed by our hypotheses pertaining to the prediction of expatriation willingness on the basis of FFM personality and other individual differences variables.

5.2 Expatriation willingness

Although the average age of expatriates was found to be 40 years in the aforementioned meta-analysis examining predictors of expatriate job performance (Mol et al., 2005), there is evidence that organizations are sending younger employees with as little as two or three years work experience on expatriate assignments (Tharenou, 2003). This implies that the turnover time between domestic applicants expressing expatriation willingness (intention) and these applicants accepting or refusing an expatriate assignment offer (behavior) may be relatively short. Interestingly, Tharenou demonstrated that the correlation between graduating students' receptivity to a foreign assignment and their receptivity to a foreign assignment assessed two years later when they were employed in a domestic position is high ($r = .58$, $p < .001$, $N = 213$). Tharenou concludes that this stability indicates that receptivity to foreign assignments may be a personality-like construct. Furthermore, albeit in domestic research, Brett and Reilly (1988) concluded that willingness to relocate reliably predicts the actual transfer decision. These findings suggest that the match between expatriation willingness intentions and the resulting behavior, namely acceptance of a foreign assignment is quite high on the time element. In addition, the willingness construct, as delineated for the purposes of the present investigation, was explicitly aimed at tapping into the propensity for an action (acceptance) toward a particular target (an expatriate assignment) within a particular context (the international job market). Taking the above matches on the time, action, target and context elements into account implies that willingness intentions should strongly relate to assignment acceptances (cf. Brett & Reilly, 1988). Ajzen and Fishbein (1977) did indeed find the strongest behavior-intention correlations for studies that demonstrated a high correspondence between attitudinal and behavioral entities on the target and action elements, ranging from $r = .36$ to $r = .82$ for studies that had employed single act criteria, as is assignment acceptance.

5.3 Development of hypotheses

Moving to another country, leaving behind a social network, and facing challenges in the host country, where the customs, norms, and language may be very

different, implies that expatriate candidates are likely to give the assignment acceptance or rejection decision thoughtful and deliberate consideration. Expatriate candidates are likely to engage in substantial self-reflection as to what it takes to be an expatriate. Expatriate candidates whose opinions of themselves are low, are likely to conclude that they are not up to the challenge, and will be less willing to take on an expatriate assignment. Such self focused opinions are captured by the core self-evaluations construct, which Judge et al. (1997) define as bottom line evaluations that individuals hold about themselves. They state that the core self-evaluations construct is a broad dispositional trait that is indicated by four more specific traits, namely self-esteem, generalized self-efficacy, locus of control and emotional stability. It has been demonstrated that core self-evaluations affect job performance through their strong effect on motivation (see for example Erez & Judge, 2001). Since expatriation willingness can be conceived of as one's motivation or intention to take on an expatriate assignment and since low opinions of oneself may serve to shed doubt on one's ability to cope with the turmoil of an international relocation, it is expected that core self-evaluations will relate positively to expatriation willingness.

> *Hypothesis 1:* Applicants with higher scores on core self-evaluations will have higher ratings on their willingness to expatriate.

There are at least two streams of research suggesting that the FFM might have validity in predicting expatriation willingness. Within a first stream of research that directly focused on expatriation willingness, Wan, Hui, and Tiang (2003) found empirical support for the idea that emotional stability should relate to expatriation willingness in a sample of Singaporeans. They found that people who score highly on neuroticism are less tolerant to the ambiguity and stress that are inherent in international relocations. In addition, both Wan et al. (2003) and Aryee et al. (1996) proposed that extraversion relates to international relocation willingness because extraverts are more likely to seek out sources of support to deal with the uncertainty and stress that the international relocation might entail. However, only Aryee et al. (1996) found support for their expectation about extraversion. Konapaske, Robie and Ivancevich (2005) supported their hypothesis that adventurousness on the openness dimension relates to spousal willingness. On the basis of this finding, which is likely to generalize to expatriates, it seems that applicants high in openness are likely to be

more willing to embark on an expatriate assignment because open people have "…a voracious appetite for new ideas and activities and are easily bored" (Howard & Howard, 2001, p. 31). In support, Douthlitt, Eby, and Simon (1999) found a moderate correlation ($r = .36$, $p < .01$) between openness and willingness to expatriate. To our knowledge agreeableness and conscientiousness have never been directly investigated in relation to willingness to expatriate, though Black (1990) suggested that agreeable expatriates are more apt at handling transition stress.

A second stream of research that has more indirect implications for the link between the FFM dimensions and expatriation willingness derives from career psychology. It has long been recognized within the extant literature that expatriate assignments are beneficial to one's career (see for example, Vance, 2005). Of 306 expatriates who recently participated in a survey (Mol, Born, Hoekstra, Willemsen, & Van Der Molen, 2007), 76.9% indicated that they saw their expatriate assignment as a means to further their career and/or increase promotional opportunities. In the domestic context Reed, Bruch and Haase (2004) provided support for the relationship between conscientiousness, extraversion, and emotional stability on the one hand and career search self efficacy and career information seeking on the other. Rottinghaus, Day, and Borgen (2005) report significant correlations of the NEO-FFI personality variables with almost all of the three subscales of their career futures inventory, namely career adaptability, career optimism, and perceived knowledge of the job market. These findings lend further credence to the idea that the FFM is useful in predicting expatriation willingness since willingness could be framed in terms of an employee's self-initiated career advancement. Based on these literature findings, it is expected that the FFM dimensions will explain variance in expatriation willingness.

> *Hypothesis 2:* Applicants with higher scores on emotional stability, extraversion, openness to experience, agreeableness and conscientiousness will have higher ratings on willingness to expatriate

Although the FFM dimensions have an impressive track record in predicting a large range of different outcomes, a salient question is whether more expatriate specific predictors, such as intercultural sensitivity, for instance, may also be found to relate to expatriation willingness. Indeed, on the basis of the previously discussed compatibility principle (Ajzen, 1988), it could be expected that such predictors might

more closely resemble the expatriation willingness construct at the context and target and action elements.

The expatriate specific constructs included in this investigation are intercultural sensitivity (Hammer, 1998; Hammer, Bennett, & Wiseman, 2003), cultural flexibility (Shaffer, Gregersen, Ferzandi, Harrison, & Black, 2006), tolerance for ambiguity (Nishida, 1985; Ruben & Kealey, 1979), tolerance for uncertainty (Gudykunst & Nishida, 2001; Guitel, 2004), category width (Detweiler, 1980), and implicit cultural adaptability theories. These predictors are all directed towards the fundamental defining feature of expatriate assignments, being cross-cultural transitions. In addition, all of these constructs have been highlighted within the expatriate literature as contributing to expatriate effectiveness. Someone who holds these characteristics can be expected to be more likely to succeed in the expatriate job context than someone who does not (Mol, Born, Hoekstra, Willemsen, & Van Der Molen, 2006).

In his Attraction Selection Attrition (ASA) model, Schneider (1987, p. 441) postulates that attraction to, selection by, and attrition from organizations may yield particular types of employees. It is proposed here that the same holds true for prospective expatriates, in that those who perceive themselves to be successful in a future expatriate assignment will be more likely to self-select (or demonstrate an expatriation willingness) whereas those who do not will be more likely to self-deselect (or demonstrate an expatriation unwillingness). A considerable part of such self-reflection and selection is likely to be framed in terms of the bridging of cultures that is central to the expatriate experience.

It is hypothesized below that these constructs will account for variance in the expatriation willingness construct. Before that, however, two of the aforementioned constructs need a more detailed introduction. These are category width (Detweiler, 1980) and implicit cultural adaptability theories (cf. Dweck & Legget, 1988).

Category width, a cognitive individual differences variable, was defined by Detweiler as the amount of discrepancy tolerable to people among members of any particular category. For example, narrow categorizers might only find very few countries in the world ‘democratic’ while broad categorizers might include many more countries in their category of democratic countries. Basically, this cognitive construct answers the question of how similar things have to be called by the same name. Detweiler (1980) empirically demonstrated that category width has validity in

predicting individuals' reactions to people of other cultures. He stated that "a narrow categorizer would be one who should be less able to adjust successfully to the cultural differences, since the observed behavior deviates from narrowly defined normal or desirable categories" (Detweiler, 1980, p. 284). A one-way analysis of variance with three levels of category width (narrow, moderate and wide) as the independent variable and length of service in months as the dependent variable conducted on data collected from a small sample ($N = 22$) of Peace Corps volunteers provided tentative support for the hypothesis that category width would be negatively related to length of service in months ($F = 5.97$, $df = 2.19$, $p < .01$).

According to Dweck and Legget (1988), individuals' implicit theories serve to orient them towards specific goals that in turn predict their adaptive (mastery oriented) or maladaptive (helpless) behaviors. They state that "implicit beliefs about ability predict whether individuals will be oriented toward developing their ability [incremental theory] or toward documenting the adequacy of their ability [entity theory]" (Dweck & Legget, p. 263). Since implicit theories seem to be deeply rooted in motivation (Dweck & Legget), it was decided to develop an expatriate specific measure of applicants' implicit theories about cultural adaptation. It was expected that applicants who had an entity theory of cultural adaptation, that is, who believed that one's cultural adaptation is something that cannot be altered, would not seek out expatriate assignments. Applicants who hold incremental theories, on the other hand, were expected to be more willing to embark on an expatriate assignment. Finally, it should be noted that 'true' cultural adaptation (as opposed to beliefs about one's future cultural adaptation) was not itself included as a predictor variable because it only becomes manifest after the selection decision. From the above discussion on expatriate specific predictors, we distilled the following hypothesis:

> *Hypothesis 3*. Expatriate specific constructs, being intercultural sensitivity, cultural flexibility, tolerance for ambiguity, tolerance for uncertainty, category width, and an implicitly held cultural adaptability theory will be positively related to expatriation willingness

Finally, a number of biographical items about relevant past behaviors were included in the present investigation. Relevant past behavior is one of the best predictors of future behavior (e.g., Guion, 1998). Based on their review of the (meta-

analytic) literature, Salgado, Viswesvaran and Ones (2001) conclude that biodata are among the most valid predictors in domestic personnel selection. In addition, Mount, Witt, and Barrick (2000), and McManus and Kelly (1999) found support for the incremental validity of biodata up and over the Big Five in the prediction of job performance. To the best of our knowledge, however, biodata have seldom been used in the prediction of expatriate job performance and expatriation willingness.

Notable exceptions in the dearth of literature relating biodata to expatriate job performance and expatriation willingness are the study by Wan et al. (2003) and a study intended to validate the biographical Diversity of Life Experiences (DOLE) measure which is aimed at assessing receptiveness to dissimilar others (Douthlitt et al., 1999). Wan et al. (2003) found a negative effect on willingness for the presence of school going children, but no effects for the presence of a dual income family and country tenure and job tenure. Douthlitt et al. (1999) report a correlation of .41 ($p <$ .01) between the DOLE and expatriation willingness, demonstrating that specific and relevant biodata may be powerful predictors of expatriation willingness. Based on these findings, it is hypothesized that specific and verifiable indicators of previous international behaviors will relate to expatriation willingness.

> *Hypothesis 4*: Foreign travel, number of countries visited on holiday, travel remoteness, foreign living experience, foreign travel liking, number of friends abroad, number of foreign friends living in home country, and foreign language ability will account for variance in expatriate willingness

There are theoretical grounds on the basis of which differential predictor performance in explaining variance in expatriation willingness may be expected. Moreover, the complete list of the aforementioned 20 predictors, even if found to be valid, is likely to be too exhaustive to be used within the applied context. The theoretical suppositions for differential predictor performance and the hypothesis that derives from them are therefore discussed below.

Several expatriate context specific predictors have been shown to relate stronger to expatriate job performance than the Big Five factors (cf. Fernandez de Cueto, 2004; Mol et al., 2005). Fernandez de Cueto attributes this phenomenon to the fact that broad-based characteristics are not specifically developed to capture the uniqueness of international assignments and that there may be challenges that

expatriates face that require specific manifestations of personality traits. Proponents of specificity in the broad versus narrow debate in the Industrial/Organizational psychological literature of the mid 1990's have similarly argued and provided evidence for the idea that narrow traits contain specific non-error variance that correlates highly with the job performance of domestic employees (Schneider, Hough, & Dunnette, 1996). In addition, Hogan and Roberts (1996) concluded that matching predictors with criteria will always enhance validity. These ideas also closely mirror Ajzen's (1988) compatibility principle that was discussed earlier. The predictors included in this investigation can be scrutinized in terms of the specificity of their action, target, context and time elements. The variables that are included in Hypothesis 1 (core self-evaluations) and 2 (FFM dimensions), are traits that by nature specify neither a particular action, target, context nor time. Furthermore, core self-evaluations, which is thought to be conceptually broader than the FFM dimensions (indeed it includes emotional stability as but one of its indicators), is likely to have implications for an even greater range of actions than the FFM dimensions. The expatriate specific predictors included in Hypothesis 3 are more specific than core self-evaluations and the FFM dimensions in that they are specifically oriented towards the intercultural context that is central to the expatriate experience. In addition to relating to the international or intercultural context, the biodata presented in Hypothesis 4 specify a particular action towards a particular target at a particular time in a particular context. In summary, it seems that the predictors included in this investigation can be meaningfully distinguished based on the specificity of their action, target, context and time elements. The compatibility with the willingness construct is least for core self-evaluations, slightly more for the FFM dimensions, more yet for the expatriate specific predictors and most for the biodata. It is proposed here that the more compatible predictors will outperform less specific predictors in explaining variance in expatriation willingness.

> *Hypothesis 5*: The FFM dimensions will explain more variance in expatriation willingness than core self-evaluations (5a); The expatriate specific constructs will explain more variance in expatriation willingness than core self-evaluations (H5b) and the FFM dimensions (H5c). Finally, biodata will explain more variance in expatriation willingness than core self-evaluations (H5d), the FFM dimensions (H5e) and the expatriate specific constructs (H5f).

5.4 Method

Participants

Second to final and final year masters' students (N = 305, 41.0% males, and 1.6% missing gender information, mean age = 21.6, SD = 2.7) from two large Dutch universities responded to an e-mail invitation to participate. The average response rate over the two subsamples was 31.9%. Although this response rate falls within the 20th percentile of Roth and BeVier's (1998) normative response rates for postal surveys, it should be noted that the current study employed e-mailed invitations and it is unclear how many of the invitations were blocked by spam filters, or did otherwise not reach intended recipients. All participants, except 39 students at one university who choose to fulfill research participation requirements instead, received € 7.00 for completing the questionnaire, which took them approximately 45 minutes to complete. The use of English is pervasive at Dutch universities. Rather than translating the existing web-based instrument it was therefore decided to have students complete the English language version. Six students were found to have rated their English ability as intermediate or below when scores on self-rated English reading ability and self-rated English comprehension ability were averaged per respondent. Their data were discarded leaving a final sample of 299 students.

Measures: Independent variables

A web-based instrument was used in this study. It contained scales aimed at assessing core self-evaluations, the FFM dimensions (emotional stability, extraversion, openness, agreeableness, and conscientiousness), category width, tolerance for ambiguity, tolerance for uncertainty, intercultural sensitivity, implicit adaptability theories, cultural flexibility and the expatriate specific biodata. All of these constructs, with the exception of implicit cultural adaptability theories, were adopted from the extant literature. Below, the scales are described in more detail. Note that the reliabilities given are reliabilities found in previous research (see Table 2 for the reliabilities found within the present sample). As may be observed within this table, reliabilities for all of the scales were above Nunnally and Bernstein's (1994) α = .70 recommendation for instruments used in research.

Core self-evaluations (12 items; α = .85). Core self-evaluations were assessed by means of the Core Self-Evaluations Scale (Judge, Erez, Bono, & Thoresen, 2003). Judge et al. define core self-evaluations as a basic, fundamental appraisal of one's worthiness, effectiveness, and capability as a person. An example item of the Judge et al. (2003) scale is "I am confident I get the success I deserve in life" (+). Items were rated on a scale ranging from 1 (*strong disagree*) to 5 (*strongly agree*).

Big Five personality. Items for each of the Big-Five personality dimensions were obtained from the International Personality Item Pool (IPIP) (Goldberg, 1999). Ratings were provided on a five-point scale ranging from 1 (*very inaccurate*) to 5 (*very accurate*). The IPIP neuroticism scale (10 items; α = .86) items was mirrored to be indicative of emotional stability, an example item being "I am very pleased with myself" (+). An example of an item on the IPIP Extraversion Scale (10 items; α = .86) is "I am the life of the party" (+). An example of an item on the IPIP Openness to Experience Scale (10 items; α = .82) is "I believe in the importance of art" (+).An Example of an item on the IPIP Agreeableness Scale (9 items; α = .77) included "I have a good word for everyone" (+). The item "speak my mind" was removed due to a negative corrected item total correlation. Finally, an example items of the IPIP Conscientiousness scale (10 items; α = .81) is "I am always prepared" (+).

Category width. Detweiler (1980) defines category width as the amount of discrepancy allowable among category members, that is how similar do things have to be called by the same name In order to tap this construct Detweiler (1980) constructed the Category Width Scale. On this scale, respondents are presented nonsensical prototypical figures (see Figure 1 for a sample item) for four nonsensical categories, being "penims", "sarkus", "ifuns", and "anaps". These prototypical figures are respectively accompanied by 10, 20, 30 and 40 figures that resemble the prototypical figures to varying degrees. Respondents are instructed to indicate which of these 100 figures belong to the respective categories.

Tolerance for ambiguity (10 items; α = .86 for 22-item scale). Tolerance for ambiguity was assessed using a subset of 10 items that were selected from McClain's (1993) 22-item Multiple Stimulus Types Ambiguity Tolerance (MSTAT-I) scale. McClain (1993) defines tolerance for ambiguity "…as a range, from rejection to attraction, of reactions to stimuli perceived as unfamiliar, complex, dynamically uncertain, that was acquired from the MSTAT-I scale is "I don't think new situations

This is a Penim. Please place a checkmark below the figures that are penims.

Figure 1. Example item of Detweiler's (1980) category width scale.

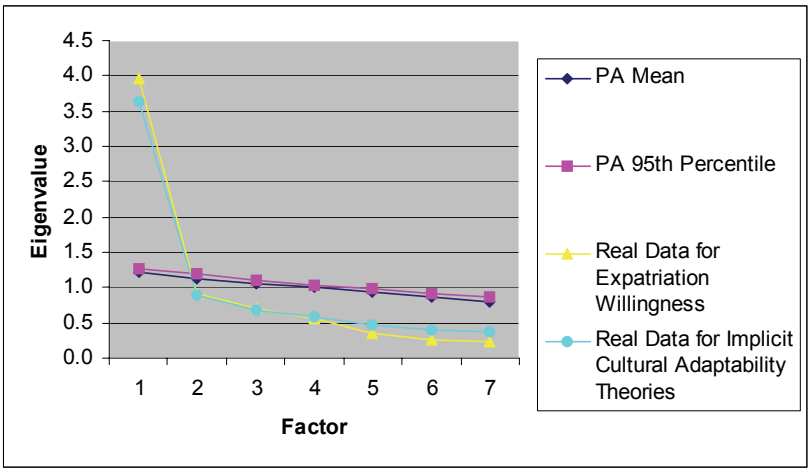
are any more threatening than familiar situations" (+). Items were rated on a scale ranging from 1 (*strongly agree*) to 7 (*strongly disagree).*

Tolerance for uncertainty (10 items; α = .94 for 27-item scale). Tolerance for uncertainty was assessed on the basis of a selection of ten items from the 27-item Intolerance for Uncertainty Scale (Buhr & Dugas, 2002). Dugas, Gosselin and Ladouceur (2000) define intolerance for uncertainty (i.e., the opposite of tolerance for uncertainty) "as the excessive tendency of an individual to consider it unacceptable that a negative event may occur, however small the probability of its occurrence" (p. 552). For the current purposes, items were recoded to reflect tolerance for uncertainty. An example of an item that was selected for the purposes of this study is "When I am uncertain I can't function very well" (-). Tolerance for uncertainty items were rated on a scale ranging from 1 (*not at all characteristic of me*) to 5 (*entirely characteristic of me*).

Intercultural sensitivity. (24 items; α = .86). Intercultural sensitivity was assessed by means of Chen and Starosta's (2000) 24-item Intercultural Sensitivity Scale. Chen and Starosta define intercultural sensitivity as "an individual's ability to develop a positive emotion towards understanding and appreciating cultural differences that promotes appropriate and effective behavior in intercultural communication" (p. 5). "I am pretty sure of myself in interacting with people from different cultures." is an example item. Items of this scale were rated on a scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*).

Implicit cultural adaptability theories. (7 items). Items were self-developed to assess whether students believed their adaptability to other cultures was fixed (entity theory) or malleable (incremental theory). All items on this scale are listed in Table 1 and were rated on a scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). An exploratory principal components analysis was used to examine the underlying structure of the scale. Parallel Analyses (PA) on randomly generated data (Hayton, Allen, & Scarpello, 2004), suggested a one factor solution (see Figure 2) that explained 51.8% of the variance (Initial Eigenvalue = 3.625). The PA mean and the PA 95th percentile Eigenvalues in Figure 2 were based on 100 exploratory factor analyses that were conducted on randomly generated datasets using syntax obtained from Hayton et al. (2004). The decision rule for factor retention proposed by these

Figure 2. Plot of Actual Eigenvalues for Implicit Adaptability Theories and Willingness Versus Randomly Generated Eigenvalues



Note. Parallel Analysis (PA) mean and Parallel Analysis 95th percentile values were computed on the basis of parallel factor analyses conducted on 100 randomly generated datasets that corresponded to the real data in terms of sample size (n), the number of items (i.e., 7), and the number of scale points (i.e., 5). The decision rule for factor retention is to retain only those factors whose Eigenvalues are greater than those calculated on the basis of the random data (Hayton, Allen, & Scarpello, 2004).

authors is to retain only those factors whose Eigenvalues are greater than those based on randomly generated data. On the basis of these analyses, it was decided to retain only one factor. All items had factor loadings of .60 or higher, with a mean loading of .72. (see Table 1).

Cultural flexibility (7 items; $\alpha = .74$). Cultural Flexibility was assessed using seven positively keyed items that were constructed by Shaffer et al. (2006), an example item being "learning about other cultures is interesting and fun". Shaffer et al. (2006) defined the construct as "the capacity to substitute activities enjoyed in one's home country with existing and usually distinct, activities in the host country." (p. 12). Cultural flexibility items were rated on a scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*).

Biodata. Eight items were used to assess various aspects of students' intercultural experiences being 1) foreign travel; 2) countries visited on holiday; 3) travel remoteness; 4) foreign living experience; 5) foreign travel liking; 6) number of friends abroad; 7) number of foreign friends living in the home country, and 8) foreign and home country language ability. Three of these eight items were obtained from Van der

Analysis for Implicit Cultural Adaptability Theories		
1	You have a fixed degree of intercultural effectiveness; you can do little to change that.	.70
2	Through training people can improve their intercultural effectiveness.	.60
3	Your intercultural effectiveness is a part of you that cannot really be altered.	.77
4	Interculturally effective expatriates are born, not made.	.66
5	You cannot really change how interculturally effective you are.	.78
6	You may learn new things, but you cannot change your basic intercultural effectiveness.	.72
7	People can significantly improve their intercultural effectiveness.	.78
Total variance explained by implicit cultural adaptability theories factor		51.79
Analysis for Expatriation Willingness		
1	How would you feel about having a job that requires a lot of traveling to non-Dutch but English speaking foreign countries?	.85
2	How would you feel about having a job that requires a lot of traveling to non-Dutch and non-English speaking countries?	.84
3	It's my goal to have the experience to live and work in a foreign country	.67
4	In case I was expatriated (i.e. sent abroad to work and live in a foreign country for a number of years), I would use an expatriate assignment as a means to further my career/ increase my promotional opportunities	.41
5	I would only take on an expatriate assignment if it was forced upon me	.66
6	How capable do you consider yourself for an international career?	.84
7	What is the probability that you will eventually start an international career?	.88
Total variance explained by expatriation willingness factor		56.61

Note. Factor loadings have been rounded to two decimals.

Table 1
Item loadings for one implicit cultural adaptability theories factor and one expatriation willingness factor (N=299)

Zee and Van Oudenhoven's (2000) indicators of multicultural involvement and four items were obtained from the content domain "Experiencing different cultures through travel" of the Diversity of Life Experiences (DOLE) instrument which was constructed by Douthlitt et al. (1999). An example item is: "In how many countries have you spent your holidays during the last five years", which was rated on a scale ranging from 1 (*1*) to 15 (*15 or more*).

Foreign and home country language ability was assessed by the following items which were self-developed: "Please indicate your proficiency in the following languages". These items were arranged in a six row x five column format with each cell in each column containing identical items. Column one contained six pull-down menus with all the modern languages in the world. Students could thus choose to assess their language ability in up to six languages, which was deemed sufficient. Columns two through five contained pull-down menus that were respectively labeled

"writing ability", "comprehending ability", "reading ability" and "speaking ability". The rating scale that emerged upon clicking each of these pull-down menus ranged from 1 (*none*) to 6 (*native*). Students' responses on English reading and comprehension ability were used to screen out students whose English ability was deemed insufficient to understand the questionnaire, as described earlier. Scores on language ability were computed by summing the scores on each of the abilities across all of the chosen languages.

Measures: Dependent variables

Expatriation willingness (7 items). Expatriation willingness was assessed using seven items, two of which (i.e., "How capable do you consider yourself for an international career?" and "What is the probability that you will eventually start an international career?") were based on a scale for international orientation that was obtained from Van der Zee and Van Oudenhoven (2000) and another one of which was adapted from the content domain "Experiencing different cultures through travel" of the Diversity of Life Experiences (DOLE) instrument. These items were "How would you feel about having a job that requires a lot of traveling to non-Dutch but English speaking foreign countries?" and "How would you feel about having a job that requires a lot of traveling to non-Dutch and non-English speaking countries?"

The final three items were self-developed. Although all items for expatriation willingness (see Table 1) were assessed on a five point scale, the anchors for specific items varied due to differing item questioning. An exploratory principal components analysis was used to examine the underlying structure of the expatriation willingness items. Hayton et al.'s (2004) parallel analyses suggested a one-factor solution that explained 56.6 % of the variance (Initial Eigenvalue = 3.963) in expatriation willingness (see Figure 2 and Table 1).

Unobtrusive expatriation likelihood. (1 item). In addition to Expatriate willingness, following Van der Zee and Van Oudenhoven (2000), Expatriation likelihood was also assessed unobtrusively by asking students to enter the title of their aspired job after graduation. These job titles were coded for their international scope. A job title was coded with "0" ($N = 266$) in case it pertained to a job that is typically carried out domestically and in which cross-cultural collaboration is not obviously required (e.g.,

architect) and a "1" ($N = 19$) in case it pertained to a job that is typically carried out on an expatriate basis (e.g., ambassador) or in case it pertained to a job in which a significant amount of cross-cultural interaction and shorter term business travel is required (e.g., international trader). In support for the external validity of our specifically developed willingness scale, the coded international scope of students' self provided desired job titles correlated significantly with the expatriation willingness scale ($r = .26$, $p < .001$, $N = 285$), despite the fact that the unobtrusive expatriation likelihood variable was highly skewed in favor of domestic jobs (with only 6.7 percent of students being coded as aspiring an expatriate position).

5.5 Results

Relationships of the independent variables with expatriation willingness (hypotheses 1-4)

Support for Hypotheses 1-4 was generated on the basis of bivariate (i.e., correlational) analyses, the results of which are presented in Table 2. This table also presents the descriptive statistics of all variables. As hypothesized, the core self-evaluations scale was significantly related to expatriation willingness. This correlation ($r = .27$, $p < .01$) was moderate in size. Hypothesis 2 was supported for emotional stability ($r = .18$, $p < .01$), extraversion ($r = .32$, $p < .01$), openness ($r = .11$, $p < .05$) and conscientiousness ($r = .19$, $p < .01$), but not for agreeableness. With regards to the expatriate specific predictors, it was found that cultural flexibility ($r = .56$, $p < .01$), intercultural sensitivity ($r = .52$, $p < .01$), and tolerance for ambiguity ($r = .42$, $p < .01$) were rather strongly related to expatriation willingness, and that implicit adaptability theories ($r = .13$, $p < .05$) and uncertainty tolerance ($r = .23$, $p < .01$) demonstrated small yet significant relationships with expatriation willingness. All of the aforementioned relationships were in the expected direction. Considering the fact that category width was the only expatriate specific predictor that did not relate significantly to expatriation willingness, considerable support was generated for Hypothesis 3. Finally, all of the biographical items with the exception of foreign travel liking were significantly related to expatriation willingness, with number of friends abroad ($r = .48$, $p < .01$) and (foreign) language ability ($r = .41$, $p < .01$) demonstrating moderate

	M	SD	% of items with total range	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
1. Age	23.09	2.76	-	(-)									
2. Gender	1.58	.49	-	-.07	(-)								
3. Core Self Evaluations	3.57	.51	75	-.02	-.15**	(.84)							
4. Emotional Stability	3.60	.66	100	.08	-.19**	.73**	(.86)						
5. Extraversion	3.45	.70	100	.06	.20**	.43**	.40**	(.89)					
6. Openness	3.59	.61	90	.13*	.10*	-.03	.03	.12*	(.76)				
7. Agreeableness	3.84	.48	56	-.04	.14**	.18**	.24**	.16**	.16**	(.72)			
8. Conscientiousness	3.52	.54	100	.08	.19**	.34**	.20**	.28**	.07	.17**	(.77)		
9. Ambiguity Tolerance	4.55	.81	90	.04	-.08	.38**	.30**	.46**	.24**	.11*	.26**	(.79)	
10. Category Width	16.84	8.66	-	-.03	-.02	-.04	.05	.04	-.02	.09	.10*	.02	(-)
11. Cultural Flexibility	4.03	.47	71	-.02	-.02	.35**	.30**	.36**	.19**	.25**	.16**	.43**	.10*
12. Intercultural Sensitivity	3.89	.43	83	.06	.06	.28**	.23**	.30**	.23**	.33**	.28**	.36**	.07
13. Implicit Cultural Adaptability Theories	3.79	.55	43	-.04	.06	.13*	.05	-.01	.22**	.21**	.03	.06	.04
14. Uncertainty Tolerance	3.52	.62	100	.01	-.14**	.45**	.47**	.28**	.08	.10*	-.06	.42**	-.07
15. Foreign Travel	2.45	1.11	100	.08	.02	.12*	.12*	.19**	.05	-.06	.10*	.22**	-.10*
16. Countries Visited on Holiday	4.55	2.24	-	.03	.12*	.09	.08	.13*	-.06	-.09	.03	-.01	.04
17. Travel Remoteness	3.69	1.02	100	.08	.05	.16**	.09	.10*	.07	.04	.07	.21**	.07
18. Foreign Living Experience	1.43	.50	100	.07	.04	.11*	.12*	.17**	.01	.10*	.07	.10*	-.01
19. Foreign Travel Liking	4.65	.94	-	-.14**	.02	.02	.03	-.03	-.05	.06	.00	-.08	.02
20. Number of Friends Abroad	2.51	3.26	-	.06	-.06	.13*	.12*	.25**	.07	.20**	.07	.28**	-.01
21. Number of Foreign Friends in the Netherlands	1.26	2.01	-	.13*	.12*	.06	.07	.11*	.17**	.05	-.02	.09	.00
22. Language Ability	63.33	14.60	-	-.19**	-.07	.17**	.06	.11*	-.01	.03	.05	.23**	.10*
23. Expatriation Willingness	3.64	.79	100	-.04	.01	.27**	.18**	.32**	.11*	.09	.19**	.42**	.07

Note. Reliabilities are reported in the diagonal.
* Correlation is significant at the .05 level (1-tailed).
** Correlation is significant at the .01 level (1-tailed).

Table 2: Means, standard deviations, range, internal consistency, and scale intercorrelations of the predictors and the expatriation willingness criterion (N=299)

	11.	12.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.
1. Age													
2. Gender													
3. Core Self Evaluations													
4. Emotional Stability													
5. Extraversion													
6. Openness													
7. Agreeableness													
8. Conscientiousness													
9. Ambiguity Tolerance													
10. Category Width													
11. Cultural Flexibility	(.73)												
12. Intercultural Sensitivity	.62**	(.90)											
13. Implicit Cultural Adaptability Theories	.23**	.25**	(.84)										
14. Uncertainty Tolerance	.40**	.19**	.15**	(.85)									
15. Foreign Travel	.16**	.23**	-.02	.00	(-)								
16. Countries Visited on Holiday	-.01	.03	.00	.01	.06	(-)							
17. Travel Remoteness	.24**	.24**	.08	.14**	.48**	.18**	(-)						
18. Foreign Living Experience	.25**	.42**	-.02	-.01	.22**	.03	.19**	(-)					
19. Foreign Travel Liking	-.01	-.02	.00	.05	-.43**	-.02	-.27**	-.13*	(-)				
20. Number of Friends Abroad	.39**	.44**	.02	.16**	.16**	-.03	.21**	.46**	-.02	(-)			
21. Number of Foreign Friends in the Netherlands	.11*	.21**	.02	.07	.12*	.12*	.05	.18**	-.06	.19**	(-)		
22. Language Ability	.30**	.26**	.12*	.20**	.14**	.02	.15**	.16**	.02	.33**	.09	(-)	
23. Expatriation Willingness	.56**	.52**	.13*	.23**	.25**	.12*	.35**	.38**	-.04	.48**	.12*	.41**	(.87)

Note. Reliabilities are reported in the diagonal.
* Correlation is significant at the .05 level (1-tailed).
** Correlation is significant at the .01 level (1-tailed).

Table 2: Means, standard deviations, range, internal consistency, and scale intercorrelations of the predictors and the expatriation willingness criterion (N=299)

to strong correlations, foreign travel ($r = .25$, $p < .01$), travel remoteness ($r = .35$, $p < .01$) and foreign living experience ($r = .38$, $p < .01$) demonstrating medium correlations, and countries visited on holiday ($r = .12$, $p < .05$) and number of foreign friends in the Netherlands ($r = .12$, $p < .05$) demonstrating weak correlations. Considerable support was therefore also provided for Hypothesis 4.

Results for the increased specificity leads to increased predictability hypothesis 5(a-e).

As interpreting standardized beta weights from a multiple regression model is problematic (see LeBreton, Hargis, Griepentrog, Oswald, & Ployhart, 2007), it was decided to conduct a relative weight analysis as outlined in Johnson (2000). Relative weights yield results that are conceptually sensible by reflecting the proportional contribution of a predictor to the prediction of a dependent variable. The epsilon values (ε) or relative weights and the relative percentages of predictable variance in expatriation willingness are respectively presented in the third and fourth columns of Table 3, where the percentage of predicted variance equals $\varepsilon_i / R^2 * 100$. The relative weights analysis shows the relative contributions of each predictor to the regression equation, with most of the "best" predictors stemming from the two most specific predictor sets, namely the expatriate specific predictors and the biodata, extraversion being the exception (see Table 3). This analysis therewith appears to provide preliminary support for Hypothesis 5. These analysis, however, are not sufficient to draw unequivocal conclusions regarding Hypothesis 5, because this hypothesis was formulated at the predictor set level and the relative weights analyses could only be conducted at the single predictor level. Following the Lievens, Van Hove, and Schreurs (2005) analytical strategy, therefore the percentages of predictable variance for each predictor were summed into a predictor set total (see Table 3, column 4). These percentages provide further support for our hypothesis that increased specificity leads to increased predictability in that each specific predictor set accounts for more variance in the expatriation willingness scale than its broader counterpart. Yet, in this analysis groups with more predictors (such as the 8 biodata variables for example) have an unfair advantage over groups with fewer predictors (such as the singular core self-evaluations variable 'group'). Furthermore, "ε should not be used to identify the

Independent variables and predictor sets	Full Model Regression [a] Standardized regression coefficients (β)	Relative weights (ε) [b]	Percentages of predictable variance (%)[b]		Hierarchical Regression [a] R^2	ΔR^2
1.Control Variables				0.82[c]	.00	.00
Age	-.06	.00	0.65			
Gender	.01	.00	0.17			
2.Core self Evaluations	.05	.01	1.98	1.98 [c]	.09***	.08***
3.FFM Dimensions				7.52 [c]	.14***	.06**
Emotional Stability	-.06	.00	0.75			
Extraversion	.04	.02	3.79			
Openness	.01	.00	0.57			
Agreeableness	-.10*	.00	0.70			
Conscientiousness	.04	.01	1.72			
4.Expatriate Specific Predictors				42.97 [c]	.41***	.26***
Tolerance for ambiguity	.12*	.05	8.85			
Category width	.02	.00	0.35			
Cultural flexibility	.24***	.10	18.61			
Cultural Sensitivity	.13*	.07	12.37			
Implicit cultural adaptability theories	.02	.01	0.94			
Tolerance for uncertainty	-.01	.01	1.84			
5.Biodata				46.71[c]	.52***	.11***
Foreign travel	.02	.01	2.35			
Countries visited on holiday	.07	.01	1.73			
Travel remoteness	.14**	.04	7.67			
Foreign living experience	.14**	.05	9.17			
Foreign travel liking	.04	.00	0.26			
Number of friends abroad	.16**	.07	13.56			
Number of foreign friends in the Netherlands	-.02	.00	0.38			
Language ability	.15**	.06	11.59			

Note. * p<.05, ** p<.01, *** p<.001.
[a] R^2 = .520, and adjusted R^2 = .480 for both regression analyses and the relative weight analysis.
[b] The relative weights and percentages of predictable variance were calculated on the basis of Johnson's (2000, 2001) heuristic method of estimating the relative weight of predictor variables in multiple regression.
c The percentages were obtained by summing the relative predictable variance (ε) for all predictors within the relevant step.
[d] 1 = male, 2 = female.
[e] The core self evaluations scale was entered as a variable in the full model regression and as a hierarchical step in the hierarchical regression analysis.
Predictor sets 2-5 are ordered in terms of increasing specificity

Table 3
Results of Full Model Regression Analysis Relative Weight Analysis and Hierarchical Regression Analysis of the 20 predictors on Expatriation Willingness (N=299)

best subset of variables for prediction purposes. The three or four variables with the highest ε values will not necessarily be the variables that jointly yield the highest R^2" (Johnson, 2000, p. 16).

Therefore dominance analyses were conducted on the predictor sets (Azen & Budescu, 2003). This analysis consists of three levels of stringency in establishing dominance of one predictor (group) over another, namely, and from most stringent to least stringent, complete dominance, conditional dominance and general dominance. To test Hypothesis 5, a bootstrapped dominance analysis (as outlined in Azen & Budescu, (2003) was conducted that would give each predictor set its "best shot" at predicting variance in expatriation willingness. This was realized by conducting the

analyses on the standardized predicted values for each predictor set (with Set 1 containing core self-evaluations, Set 2 containing the FFM dimensions, Set 3 containing the expatriate specific variables, and Set 4 containing the biodata).

The bootstrap approach included three levels of stringency in establishing dominance of one predictor set over another (Azen & Budescu, 2003). Thus, the standardized predicted values were calculated for each predictor set (as represented within each of the Hypotheses 1-4), with Set 1 containing the control variables age and gender. Subsequently the five standardized predicted value variables (i.e., one for the control variables and four to represent each predictor set) and the willingness scale were used to conduct a dominance analysis by means of a SAS macro that was obtained from Azen and Budescu (2003). The results of these analyses are presented in Table 4. Within this table the predictors that are being compared are represented by the X_i and X_j in Columns 1 and 2, respectively. Thus D_{53} for example would denote the comparison of the biodata (X_5) with the FFM dimensions (X_3). Note that in each case i is greater than j, which means that a more specific predictor set (i) is being compared with a broader predictor set (j). Hypothesis 5 would thus be supported for a particular predictor pair comparison in case the parent sample $D_{ij} = 1$, and in case this finding was found to be highly (i.e., greater than 95%) reproducible across the 1000 bootstrap samples. According to Azen and Budescu (2003) reproducibility may be interpreted as the confidence one may place on the conclusion that the parent sample result will hold in the population.

As can be concluded from the parent sample D_{ij} values in the bottom third of Table 4, *general dominance* (i.e. the least stringent level of dominance) within the parent sample was established for all of the more specific predictor blocks over any of the less specific predictor blocks, providing substantial support for Hypothesis 5 at the least stringent level of dominance. In addition these analyses suggested that age and gender, the control variables included in this study, were generally dominated by each of the predictor blocks. In most cases, findings were highly reproducible (i.e., >95%) across the 1000 bootstrap samples, although general dominance of predictor set 5 (containing the biodata) over predictor set 4 (containing the expatriate specific predictors) was only established in 68% of the bootstrap samples and general dominance of predictor set 3 (containing the FFM) over predictor set 2 (containing

Table 4

Results for dominance analysis of the predicted values for the five predictor blocks on expatriation willingness: D_{ij}[a] Values in the sample (n = 288) and their means ($\overline{D}_{ij}$), Standard Errors, Probabilities, and Reproducability Over S = 1,000 Bootstrap Samples

Xi	*Xj*	Sample D_{ij}[a]	$\overline{D}_{ij}$	$SE(D_{ij})$	P_{ij}[b]	P_{ji}[c]	P_{noij}[d]	Reproducibility
Complete dominance (most stringent)								
2	1	0.5	0.5920	0.201	0.190	0.006	0.804	0.804
3	1	0.5	0.5715	0.175	0.143	0.000	0.857	0.857
3	2	0.5	0.5955	0.276	0.266	0.075	0.659	0.659
4	1	1.0	1.0000	0.000	1.000	0.000	0.000	1.000
4	2	1.0	1.0000	0.000	1.000	0.000	0.000	1.000
4	3	1.0	0.9995	0.016	0.999	0.000	0.001	0.999
5	1	1.0	1.0000	0.000	1.000	0.000	0.000	1.000
5	2	1.0	1.0000	0.000	1.000	0.000	0.000	1.000
5	3	1.0	1.0000	0.000	1.000	0.000	0.000	1.000
5	4	0.5	0.6540	0.378	0.487	0.179	0.334	0.334
Conditional dominance (less stringent)								
2	1	0.5	0.6510	0.236	0.308	0.006	0.686	0.686
3	1	0.5	0.6710	0.237	0.342	0.000	0.658	0.658
3	2	0.5	0.6675	0.331	0.443	0.108	0.449	0.449
4	1	1.0	1.0000	0.000	1.000	0.000	0.000	1.000
4	2	1.0	1.0000	0.000	1.000	0.000	0.000	1.000
4	3	1.0	1.0000	0.000	1.000	0.000	0.000	1.000
5	1	1.0	1.0000	0.000	1.000	0.000	0.000	1.000
5	2	1.0	1.0000	0.000	1.000	0.000	0.000	1.000
5	3	1.0	1.0000	0.000	1.000	0.000	0.000	1.000
5	4	1.0	0.6540	0.397	0.516	0.208	0.276	0.516
General Dominance (least stringent)								
2	1	1.0	0.9550	0.207	0.955	0.045	0.000	0.955
3	1	1.0	0.9930	0.083	0.993	0.007	0.000	0.993
3	2	1.0	0.8140	0.389	0.814	0.186	0.000	0.814
4	1	1.0	1.0000	0.000	1.000	0.000	0.000	1.000
4	2	1.0	1.0000	0.000	1.000	0.000	0.000	1.000
4	3	1.0	1.0000	0.000	1.000	0.000	0.000	1.000
5	1	1.0	1.0000	0.000	1.000	0.000	0.000	1.000
5	2	1.0	1.0000	0.000	1.000	0.000	0.000	1.000
5	3	1.0	1.0000	0.000	1.000	0.000	0.000	1.000
5	4	1.0	0.6830	0.466	0.683	0.317	0.000	0.683

Note. The predictors are age and gender (X_1), core self evaluations (X_2), emotional stability, extraversion, openness, agreeableness, conscientiousness (X_3), tolerance for ambiguity, category width, cultural flexibility, intercultural sensitivity, implicit adaptability, tolerance for uncertainty (X_4), foreign travel, countries visited on holiday, travel remoteness, foreign living experience, foreign travel liking, number of friends abroad, number of foreign friends in the Netherlands and language ability (X_5).

[a] $D_{ij} = 1\text{-}D_{ji}$. [b] $P_{ij} = Pr(D_{ij} = 1)$. [c] $P_{ji} = Pr(D_{ij} = 0)$. [d] $P_{noij} = Pr(D_{ij} = 0.5)$.

In dominance analysis regression analyses are carried out for each 2^p-1 predictor (p) subset combination. Subsequently, the dominance of each predictor over another is calculated with only the two predictors in the model, and for all possible models that also include some subset of the other predictors (see Azen & Budescu, 2003), with the term *k* used to denote the model size (i.e., the number of predictors in each subset model). Azen and Budescu define complete dominance of one predictor over another as the instance where the additional contribution of the first to all possible subset models is greater than that of the other. A less stringent form of dominance is conditional dominance which is said to occur when one predictor dominates another in all possible subset models of a particular model size (e.g., when *k* = 3). General dominance, finally, is concluded to occur when the average of all the conditional dominances of one predictor over another is greater than that for the other predictor. Within this table column 1 (Xi) and column 2 (Xj) denote the predictor sets that are being compared.

Dij is the sample based dominance statistic that can take on only three values (i.e., 0; 0.5; and 1). In case Dij = 0, Xj is said to dominate Xi, in case Dij = 0.5 dominance can not be established for the predictor sets being compared and in case Dij = 1 Xi is said to dominate Xj. $\overline{D}_{ij}$ refers to the average dominance of one predictor set over the 1,000 bootstrap samples, where the bootstrap is employed to simulate the distribution of Dij values in the population. The fifth column contains the standard error of the Dij values over the bootstrap samples. Since Dij can take on only one of three values (i.e., 0; 0.5 and 1) columns 6-8 represent the proportion of bootstrap samples in which Xi dominated Xj (column 6; Pij); the proportion of bootstrap samples in which Xj dominated Xi (column 7; Pji); and the proportion of bootstrap samples in which dominance could not be established (column 8; Pnoij). Column 9, finally, represents the reproducibility (or proportion of bootstrap samples that agree with the parent sample results) of the sample Dij across the 1,000 bootstrap samples.

core self-evaluations) was only established in 81% of the bootstrap samples.

Moving to the findings for the more stringent *conditional dominance,* the parent sample D_{ij} values revealed that conditional dominance was supported for all of the more specific predictor blocks over the less specific blocks except for the fact that no conditional dominance could be established for core self-evaluations over age and gender, for the FFM dimensions over age and gender, and for the FFM dimensions over core self-evaluations. The findings were highly reproducible (i.e., >95%) for all predictor pair comparisons with the exception of the following: 1) the FFM dimensions conditionally dominated age and gender in 69% of the bootstrap samples; 2) core self-evaluations conditionally dominated age and gender in 66% of the bootstrap samples; 3) core self-evaluations only conditionally dominated the FFM dimensions in 45% of the bootstrap samples; 4) Biodata only conditionally dominated expatriate specific predictors in 52% of the bootstrap samples.

The findings for conditional dominance were fully replicated at the *complete* dominance level (the most stringent level of dominance). Thus for these most stringent analyses, bootstrap reproducibility statistics provided support (i.e., were greater than 95%) for the following hypothesized dominances: 1) biodata completely dominating a) the FFM dimensions b) core self-evaluations and c) age and gender; and 2) expatriate specific predictors completely dominating a) the FFM dimensions, b) core self-evaluations, and c) age and gender. For these most stringent dominance analyses it thus appears that across bootstrap samples hypothesis 5 was for the largest part supported except for the following predictor pair comparisons: 1) biodata and expatriate specific predictors; 2) the FFM dimensions and core self-evaluations; 3) the FFM dimensions and age and gender; and 4) core self-evaluations and age and gender. Less stringent and thereby more supportive findings for Hypothesis 5 were presented with respect to the general dominance level.

Taken together, the dominance analysis findings appear to be mirrored in the results of the summated relative weights that were discussed earlier and the significances of the ΔR^2's that resulted from a hierarchical regression analysis in which predictor blocks were entered in the same order as in which they are presented in Hypothesis 5 (see the last column of Table 3). Yet, the dominance analyses provide a more robust picture than most traditional methods would have yielded.

5.6 Discussion

The aim of this study was to demonstrate that the expatriation willingness of prospective employees of multinational organizations could be predicted on the basis a) core self-evaluations, b) the FFM constructs, c) expatriate specific predictors (namely tolerance for ambiguity, category width, cultural flexibility, intercultural sensitivity, implicit cultural adaptability theories, and uncertainty tolerance), and d) biodata (e.g., countries visited on holiday, and foreign language ability). It was argued that the ability to predict expatriation willingness could help multinational organizations in moving the expatriate selection decision from the time at which the vacancy needs to be filled to the time when employees enter the organization as newcomers. The usefulness of this approach is that it ensures an adequately sized candidate pool to select from, since there is evidence that multinational organizations do not have enough candidates and have too many expatriate vacancies.

It was demonstrated that 52% (48% when corrected for shrinkage) of the variance in students' self-rated expatriation willingness could be explained by these predictors. On the basis of bivariate analyses, support was generated for the predictability of expatriation willingness on the basis of core self-evaluations (Hypothesis 1).

Hypothesis 2, pertaining to the relationship between FFM dimensions and expatriation willingness, was supported for emotional stability, extraversion, openness, and conscientiousness, but not for agreeableness. No previous findings for the relationship between agreeableness and expatriation willingness could be located in the extant literature. Rottinghaus et al. (2005) found agreeableness to only relate to career adaptability. Based on their and the present findings it seems that agreeableness might not be a particularly useful predictor of willingness to expatriate.

Hypothesis 3, relating to the relationship between expatriate specific predictors and expatriation willingness, was supported for tolerance for ambiguity, cultural flexibility, intercultural sensitivity, implicit cultural adaptability theories, and tolerance for uncertainty, but not for category width. Detweiler (1980) showed category width to have validity in predicting individuals' reactions to people from other cultures. However, in hindsight the content domain that was covered by this

construct was rather general and may not have been expatriate-specific enough (see Figure 1) to warrant inclusion in the expatriate specific predictor subset. Notwithstanding the finding for category width, considerable support was generated for Hypothesis 3.

Finally, Hypothesis 4 was supported by the relationships with expatriation willingness of foreign travel, countries visited on holiday, travel remoteness, foreign living experience, number of friends abroad and language ability but not by foreign travel liking. This latter finding is counterintuitive because foreign travel liking seems to be highly compatible with the expatriation willingness construct. Future research should endeavor to further examine this relationship.

Hypothesis 5 pertained to differential predictor performance in explaining variance in expatriation willingness. In line with Ajzen (1988), it was contended that predictors that matched the expatriation willingness criterion in terms of the specificity of their action, target, context and time elements, would explain more variance in this criterion than predictors that matched the expatriation willingness criterion to a lesser extent on these elements.

On the basis of a bootstrapped dominance analysis (Azen & Budescu, 2003), it was found that this hypothesis was fully supported within the parent sample at the least stringent level of dominance. Thus it was found that core self-evaluations dominated (i.e., was a more powerful predictor than) age and gender, that the FFM dimensions dominated both age and gender and core self-evaluations, that the expatriate specific variables dominated age and gender, core self-evaluations, and the FFM dimensions, and that the biodata dominated age and gender, core self-evaluations, the FFM dimensions, and the expatriate specific predictors. Bootstrap reproducibility statistics lead us to conclude general dominance of 1) the biodata over a) the FFM dimensions, b) core self-evaluations, and c) age and gender; 2) the expatriate specific predictors over a) the FFM dimensions, b) core self-evaluations, and c) age and gender; and 3) core self-evaluations over age and gender and 4) the FFM dimensions over age and gender. Findings for conditional dominance largely mirrored those for general dominance, although here dominance of both core self-evaluations and the FFM dimensions over age and gender was not supported by the bootstrap reproducibility results.

Upon examining the most stringent level of dominance, it was found that both the expatriate specific predictors and the biodata completely dominated age and gender, core self-evaluations and the FFM dimensions across more than 950 of the 1000 (i.e., 95%) of bootstrap samples. These findings pertaining to complete dominance provide very strong support for the dominance hypotheses regarding these variables. No complete dominance could be established for core self-evaluations over age and gender, for the FFM dimensions over age and gender, for the FFM dimensions over core self-evaluations and for biodata over the expatriate specific predictors.

In summarizing the discussion on Hypothesis 5, the bootstrapped dominance analysis findings that were presented within the above lend very strong support to the dominance of biodata and the expatriate specific predictors over core self-evaluations (Hypothesis 5b and 5d, respectively), and the FFM dimensions (Hypothesis 5c and 5e, respectively) in explaining variance in expatriation willingness, and still credible support for the dominance of the FFM dimensions over core self-evaluations (Hypothesis 5a) in explaining variance in expatriation willingness.

These findings seem to closely corroborate the idea that specific criteria, such as expatriation willingness, are best predicted by specific predictors that match the criterion in content (cf. Ajzen, 1988). That is, each of the respectively more specific predictor sets as outlined in Hypotheses 1-4, seemed to do a better job of explaining variance in expatriation willingness. The final predictor set contained the biodata that literally asked students about past experiences that were indicative of a willingness to go abroad. Clearly, these variables have much more in common with the expatriation willingness construct in terms of their action, target, context and time elements (cf. Fishbein & Ajzen, 1975) than either core self evaluations or any of the FFM dimensions.

The findings presented here lend support to the predictability of expatriation willingness of final and second to final year students at Dutch Universities. The fact that the willingness scale correlated significantly with the international scope of students' self written aspired future job titles provides support for the validity of the willingness construct.

Limitations and future research

One of the most compelling questions is whether study findings will generalize to the target population of domestic entry-level candidates. First, we will discuss two reasons as to why this may not necessarily be the case. Then we will discuss the support for the generalizability of study findings to entry level candidates.

First there is the possibility that people's standing on the predictor variables that were included within this investigation might change between the time that they are still studying at university and the time they enter the job market. The use of student samples has been criticized in the applied literature, because in many cases the findings are not generalizable to the intended research population (Anderson, 2003). However, today's university students are tomorrow's applicants and it is highly improbable that the individual differences variables (e.g., biodata, tolerance for uncertainty) that were assessed within this study would change between the time this study was conducted and the time that these students will be looking for a job.

Second, a related and perhaps more stifling issue that needs to be addressed is that of the criterion changing over time. That is, through time peoples' personal circumstances may start encroaching on their receptivity to a foreign assignment. Life events such as marriage, child rearing, needing to care for one's elderly parents, may all serve to diminish one's willingness to embark on a foreign assignment. In addition, students may simply be more adventurous than older employees. Conversely, self-initiated career improvement behaviors, increased foreign travel due to an improved financial position, difficulties in finding jobs in the home country, and spousal expatriation may all serve to increase one's willingness to embark on a foreign assignment. In this regard future research into expatriation willingness may strive to identify not only the dispositional determinants of willingness (as was the focus of the current study) but also situational constraints on and situational catalysts of expatriation willingness. In addition to the non-work-related life events that were discussed earlier, such catalysts and constraints might include the presence of repatriation planning and the availability of host country support mechanisms, cross-cultural training, and the possibility of pre-assignment acceptance host country visits.

There are also arguments that support the generalizability of the current findings to the domestic entry-level candidate population. First, although participants' age ranged from 19-48 years (M = 23.09, SD = 2.76) age did not correlate

significantly with the willingness criterion, providing some support for the stability of willingness across age within the current sample (at least as far as the early to late twenties are concerned). Furthermore, none of the predictor-willingness relations were found to be moderated by age when examined in a regression model with the other predictors entered as covariates. (These moderator analyses are available upon request from the first author). Additional support for the temporal stability of receptivity to foreign assignments among business students is provided by Tharenou (2003) who reports a correlation of .58 between receptivity prior to entry and receptivity 2 years later after entry to full time work. On the basis of this finding, Tharenou (2003, p. 512) suggests that the temporal stability of willingness may be construed as evidence that it is tapping into a personality trait.

Second, people who are married, and who have children, have been known to embark on expatriate assignments. Indeed 60.7% of expatriates who responded to a recent survey (Mol et al., 2006) indicated that they were married with 33.1% of expatriates indicating that they had dependent children with them on assignment. Apparently these expatriates' assignment acceptance was not hampered by the fact that they were married and or had children.

The fact that only Dutch students were approached in our study necessitates further investigation into whether the findings may be generalized to applicants in non-Dutch countries. In addition, the study was cross-sectional in nature. As the respondents provided ratings on both the individual differences and their willingness to expatriate at the same time, future research should attempt to employ a longitudinal design in which the personal characteristics are rated at the time of organizational entry and willingness is assessed by expatriate candidates' actual refusal or acceptance of an overseas position. This research was also limited in that facets of the Big Five personality dimensions were not addressed. Indeed, and similarly to the arguments leading up to hypothesis 5, it could be argued that specific facets of the Big Five personality dimensions might relate stronger to expatriation willingness than the superordinate dimensions. In addition, this study did not address the idea that the Big Five dimensions might vary in their specificity (Saucier & Goldberg, 1996). Future research might examine this proposition vis-à-vis expatriation willingness.

Finally, regarding the practical contribution, this study demonstrated how an innovative approach to expatriate selection, i.e., at the time applicants apply for a

domestic job within the organization, may be employed to ensure that multinational organizations have a sufficiently large expatriate candidate pool. This approach is likely to be particularly useful in those cases where from a human resource planning perspective, the need for large numbers of expatriate personnel as opposed to domestic personnel is anticipated. That is, in cases where the expatriate selection ratio is already low, the implementation of simultaneous domestic and expatriate selection could cause highly qualified applicants for the domestic position to be rejected because of their projected lack of expatriation willingness. International organizations could decide on the desirability of implementing simultaneous selection at the time of domestic entry by examining whether the expatriate selection ratio exceeds the domestic selection ratio. When this is the case, organizations might increase their expatriate candidate pools by heeding predictors of expatriation willingness that match this construct in terms of the time, target, context and action elements (cf. Fishbein & Ajzen, 1975). In employing this approach the utility of expatriate selection within multinational organizations is likely to improve.

Chapter 6

Assessing Individual Variability in Criterion Performance in Interdependent Cultures: A Validation Study by Means of the Social Relations Model*

The predominant validation paradigm in personnel selection requires the demonstration of an empirical linkage between individual differences predictors and individual variability in criterion measures that sample the job performance domain. The aim of the current investigation was to examine how such individual variability in job performance may be assessed in South Africa, a country with a collectivistic culture in which people are thought to construe the self interdependently. The extent to which individual variability in performance may be extracted from round robin ratings of job performance was explored by applying the Social Relations Model (Kenny, 1994) to data collected among 176 teams ($\overline{N}$ = 4.64) of 816 trainees at the South African Police Services. The extent to which variance in ratings given by a perceiver about a target may be attributed to the target is referred to as target variance, whereas the extent to which the variance in ratings given by a perceiver may be attributed to the perceiver is referred to as perceiver variance. Relationship variance, finally, refers to the variance that may be attributed to the idiosyncratic relationship between the target and the perceiver, after controlling for the target and perceiver variance components. In accordance with a number of theoretical propositions stemming from the cultural psychological literature, it was found that although the perceiver and relationship variance components in interdependent

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cultures seem to be roughly equal to those typically found in independent cultures, the target variance component appears much lower than that typically found in independent cultures. The target variance component nonetheless showed significant relations with conscientiousness and emotional stability. Implications for conducting validation studies in interdependent cultures are discussed in light of the findings.

The measurement of individual-level variation in criterion performance is imperative for any endeavor aimed at establishing the predictive validity of selection context individual differences variables. Indeed, Herriot and Anderson (1997, p. 11) state that one of the fundamental assumptions of the predominantly North American paradigm in personnel psychology is that "individuals' job performance can be measured and attributed to the individual". To our knowledge, however, very little research has been conducted to directly examine whether this assumption is tenable in cultural contexts that may be expected to differ markedly from the North American and Western European contexts in which most research to date has been conducted. The current investigation, which was carried out using a sample of trainees at the South African Police Services (SAPS), therefore focuses on the degree to which training performance can be measured and attributed to the individual in collectivistic, interdependent cultures, where people are thought to construe their self in terms of their relatedness to others (Markus & Kitayama, 1991), and where the articulation of individual differences in performance may serve to disrupt group harmony (Aycan & Kanungo, 2001; Davis, 1998).

6.1 Interdependent self-construal and Ubuntu: the South African case

Within South Africa, the cultural context in which this study was carried out, the practice of validating selection variables against job performance criteria has become highly desirable, if not obligatory in light of recent legislation (see "Employment Equity Act", 1998) aimed at abolishing discriminatory hiring practices. Markus and Kitayama state that African cultures are characterized by interdependent self-construal. Eaton and Louw (2000) hypothesized that collectivism would lead to differences between South Africans of African descent (79.4% of the population in South Africa) and South Africans of European descent (9.3%) (approximately 9.3% of the population; see *Mid-year population estimates, South Africa*, 2005) in the proportion of specific and social responses used in self-descriptions. Their findings supported collectivism theory, with African language speakers producing more interdependent and concrete (cf. Hofstede, 1980) self-descriptions than English language speakers. Booysen (2000) corroborated these findings using explicit quantitative measures of individualism and collectivism combined with qualitative

data collection methods, and showed that South African blacks were significantly more collectivistic than South African whites. The concept of *Ubuntu* that derives from the Zulu language, and refers to a more localized and highly ubiquitous Sub-Saharan African collectivism is receiving increasing attention within the African management literature (Karsten & Illa, 2005; Mangaliso, 2001). *Ubuntu* will be discussed in more detail after some issues in assessing performance in interdependent cultures have first been discussed.

6.2 Issues in assessing performance in interdependent cultures

A review of the sparse literature on the assessment of performance in cultures that emphasize an interdependent view of the self (such as Japan, China, or South Africa) suggests that it may be a very different ballgame than the assessment of performance in cultures that emphasize an independent view of the self (e.g. the United States). These differences pertain not only to what is thought to constitute the performance criterion domain, but also to how differing mechanisms in person perception in interdependent cultures may be expected to affect the degree to which performance ratings reflect individual differences in performance. It will be shown that current theory within the cross-cultural literature leads to opposing predictions regarding the extent to which variance may be attributable to the target (i.e., the person whose performance is being evaluated) in interdependent cultures as opposed the variance that is attributable to the target in independent cultures.

Below, first the theoretical implications and available research evidence from both the personnel psychological and social psychological literature will be discussed, trying to answer the question how interdependent self-construal may affect performance assessment. Subsequently, it is proposed that the person perceptual intricacies of performance assessment that are particular to cultures with an interdependent view of the self may be elucidated and controlled for in validation research by means of Kenny's (1994) Social Relations Model (SRM). The discussion of this model will be intertwined with the presentation of a number of research questions pertaining to the partitioning of variance components in round robin ratings of performance in interdependent cultures. Round robin in this context refers to a research design in which every person rates every other person (including themselves)

on the same aspect. After the presentation of these research questions, it will be examined whether individual variability in performance from which variance that is attributable to the rater and to the rater-ratee relationship has been removed, can be predicted on the basis of individual differences variables. Finally, the empirical results from a validation study conducted among 816 trainees at the South African Police Services (SAPS) are presented.

6.3 Implications of interdependent self-construal and Ubuntu for performance assessment

According to Markus and Kitayama (1991) the way in which individuals construe the self, others, and the interdependencies between the two, largely determines the nature of individual experience including cognition, emotion and motivation. They distinguish between independent self-construal, a predominantly Western notion in which the self is defined "… as an entity containing significant dispositional attributes, and as detached from context…" and interdependent self-construal in which "the self is viewed as interdependent with the surrounding context and it is the 'other' or the 'self-in-relation-to-other' that is focal in individual experience" (Markus & Kitayama, 1991, p. 225). A more localized African version of interdependent self-construal is *Ubuntu*. According to Sanders (1999), *Ubuntu* is captured in the Zulu phrase *umuntu ngumuntu ngabantu,* which he translated as "a human being is a human being through human beings" or "the being-human of a human being is realized through his or her being (human) through other human beings." (p. 13). Similarly, Mangaliso (2001) has stated that human interdependence is an organizing concept of *Ubuntu*. According to Karsten and Illa (2005) *Ubuntu*, or equivalent values are common to the whole of Sub-Saharan Africa, and it appears that it has applications to management practices that transcend the African continent (Mangaliso, 2001). The implications of *Ubuntu* or interdependent self-construal (as it will be referred to in the remainder of this chapter) for performance measurement are twofold. That is, both the content and process (cf. Lehman, Chiu, & Schaller, 2004) of performance assessment in interdependent cultures may be different.

6.4 The content of performance assessment in interdependent cultures

Few studies have been conducted to examine to what extent the content of the performance domain in interdependent cultures may differ from the performance domain in independent cultures. Indeed Aycan and Kanungo (2001) state that cross-cultural replications of the dimensions that have been identified in Western (read: North American) contexts (see for example, Borman & Motowidlo, 1993; Campbell, Gasser, & Oswald, 1996; Viswesvaran, 1993) have yet to be explored. Exceptions are provided by Farh, Earley and Lin (1997) and Lam (1999), who identified emic (culture specific) and etic (culture general) aspects of organizational citizenship behavior (cf. Ployhart, Weichmann, Schmitt, Sacco, & Rogg, 2003). Austin and Villanova (1992) defined the criterion as "a sample of job performance (including behavior and outcomes), measured directly or indirectly, perceived to be of value to organizational constituencies for facilitating decision about predictors or programs" (p. 838). It can be expected that that which is perceived to be of value to organizational constituencies is in part culturally construed (Aycan & Kanungo, 2001; Dore, 1987; Mol, Born, Van Der Molen et al., 2005; Ployhart et al., 2003), and that as a result the criterion domain in interdependent cultures will contain criteria that derive from interdependent self-construal. Aycan and Kanungo (2001), for example, proposed that in collectivistic cultures, interpersonal competencies such as harmonious interpersonal relations, team work facilitation, respect, loyalty and positive attitude toward superiors and process variables such as effort, motivation and goal directed behavior are emphasized more than task related competencies and outcomes in evaluating employee performance. They further state that "outcomes are important, but social and relational criteria, which are more subjective, have been weighted more heavily in evaluating employees" (p. 398). Within the South African context, Mangaliso (2001) has similarly argued that there is a higher priority for peaceful and harmonious relationships, because efficiency optimization rather than efficiency maximization is emphasized in *Ubuntu*. He further states that "attempts to maximize efficiency often incur the costs of fractured relationships, and social disruption can have unintended consequences." (p. 29). It is clear from the above that

the performance domain in interdependent cultures can be posited to contain a strong interpersonal or social component.

6.5 The process of performance assessment in interdependent cultures

Turning now to the process of performance assessment in interdependent cultures, Ployhart et al. (2003) have stated that "performance ratings require an evaluative judgment that may be highly influenced by values, and such values can differ substantially between cultures." (p. 51). Markus and Kitayama (1991) state that behavior of people with an interdependent self-construal will be significantly shaped and governed by a consideration of the anticipated reactions of others. The possibility that people heed the anticipated reactions of others in rating their own and others' performance would be extremely vexing, since it would constrain the amount of variance that is attributable to the target (or person being evaluated). For, example, employees may downplay their performance in interdependent cultures because stating one's true performance might be perceived as offensive or threatening (Akimoto & Sanbonmatsu, 1999). When this occurs, less of the variability in the scores of such ratings reflects the targets' actual performance. The same may occur when a rater considers situational constraints on a target's performance while providing the rating. There is evidence that people in interdependent cultures are likely to make such situational attributions (see Kunda, 2001). The salient question here is thus whether the Western criterion measurement paradigm will generalize to interdependent cultures. More specifically stated one may wonder to what extent variability in performance data collected in interdependent cultures, reflects variance due to the target, the rater and the relationship. We will return to this question after discussing the Social Relations Model as it may be applied to performance assessment.

6.6 The application of the Social Relations Model (SRM) to performance assessment

The fact that performance rating variability, be it by the self, peers, or supervisors, may reflect variance other than variance that is attributable to the target, has seldom been focused upon (see Greguras, Robie, Born, & Koenigs, 2007; Judge & Ferris, 1993; Ployhart et al., 2003, for exceptions) even within the dominant Western personnel psychological paradigm (Judge & Ferris, 1993). It follows from the above discussion, however, that in interdependent cultures, where individuals' behavior is shaped largely by the expected reactions of others (Markus & Kitayama, 1991), this neglect may have more far reaching consequences than in the independent cultures in which the bulk of personnel psychological research to date has been conducted. Rather than assuming that variability in employee performance ratings derives solely from the target's (or ratee's) actual performance, the current investigation therefore set out to investigate to what extent variability in peer ratings of employee performance may also be attributed to the rater (or perceiver) and the particular relationship between the rater and the ratee. In order to decompose the variability in performance ratings into the target, perceiver and relationship components, the research that is presented below employed a round robin data collection design. The major benefit of employing a round robin design is that the collected data may be analyzed by means of Kenny's (1994) Social Relations Model (SRM). This model will now be described in more detail after which our research questions will be presented.

Kenny (1994) developed the SRM theory and methodology from the person perception literature. By collecting data using round robin designs in which every member within a team consisting of at least four people rates every other member including him or herself on a certain construct, such as job performance for example, the construct variance in ratings given by raters and ratings received by ratees may be portioned into six variance components. First, the construct variance in these ratings is split into stable and unstable variance components. For the purpose of the present investigation, stable construct variance refers to variance that is consistent across items, and unstable construct variance refers to variance that is specific to an item (Kenny, 1998). Subsequently, both the stable and the unstable variance in ratings are

further partitioned into rater variance, ratee variance, and relationship variance. As an illustration, imagine four people rating one another's and their own overall job performance on a two-item measure. The first item is "overall, how you rate this person's job performance?" and the second item is "how proficient is this person in carrying out job related tasks?" First, the variance in ratings is partitioned into variance that is consistent across the two items and variance that is not. As such, the stable and unstable variance components may be likened to reliable and unreliable variance in classical test theory (cf. Kenny, 1998). Subsequently, both of these components are broken up into their rater, ratee and relationship variance components. In this example stable rater variance would be that part of the variance that is ascribed to the extent to which a particular rater generally perceives ratees as being high or low on job performance across the two items. Stable target variance would be that part of the variance that is ascribed to the extent to which a particular ratee is seen by raters in general as being high or low on job performance across the two items. Stable relationship variance would be that part of the stable variance that is ascribed to the degree to which a particular rater sees a particular target as being high or low on job performance across the two items, after controlling for the stable rater and ratee effects across the two items.

The stable ratee component, also referred to as consensus, reflects variance in performance ratings received by a particular ratee after the stable rater, stable relationship and the unstable rater, ratee, and relationship components have been partialed out. As such, ratee variance constitutes what is probably the most perceptually decontaminated estimate of an employee's own performance available to personnel psychologists today. That is, insofar as other, non-perceptual sources of contamination are not influencing the stable ratee variance component (which they undoubtedly are!), this component more closely approximates the 'ultimate criterion' than self-ratings and ratings that are obtained by means of 360-degree feedback. It can thus be expected that because individual level perceptual contamination has been removed from the stable ratee variance component, predictors in validation research will relate more strongly to this criterion component than to more traditional criterion measures that are contaminated by potential perceptual biases. The reader is referred to Kenny (1994; 1998) for a full description of the model.

Greguras et al. (2007), to our knowledge conducted the only study to date that employed the SRM to decompose variability in performance ratings. It should be

noted that this study was conducted using a US (i.e., independent) sample. They hypothesized and found support for the notion that a significant amount of the variance in performance ratings averaged over the six performance dimensions they investigated is attributable to the target (12.8%), the perceiver (7.9%) and the relationship (16.8%) variance components. The remaining 62.6% of the variance in peer ratings of performance was unstable. In summarizing the body of research on the Social Relations Model, Kenny (1994) states that in its general usage approximately 15 percent of the total variance is attributable to the target, 20 percent to the perceiver, and 20 percent to the relationship, with the remaining 45 percent reflecting unstable variance.

6.7 Implications of the Social Relations Model to performance assessment in interdependent cultures

There are at least three reasons to expect the amount of target variance to be different in interdependent cultures as opposed to independent cultures. Interestingly, there are theoretical arguments which suggest that the target variance in interdependent cultures should be higher, as well as theoretical arguments that suggest this component should be lower. These contradictory arguments are reviewed below.

First, as mentioned earlier, perceivers might simply refuse to highlight individual differences in performance because of the fact that in interdependent cultures this may disrupt group harmony. Taking this argument to the extreme with the SRM framework, this would imply that raters would be unwilling to differentiate between ratees. This unwillingness might become manifest either directly, through a refusal to participate or more indirectly by raters not distinguishing differences in performance across ratees. The latter possibility would lead one to expect a lower target variance in interdependent cultures.

A second factor that could be postulated to impinge on the amount of target variance in interdependent cultures is the fact that people in these cultures appear less prone to making the fundamental attribution error. That is, there is considerable evidence that people in interdependent cultures have a tendency to attribute behavior to the context as opposed to the dispositions of the target (Fiske, Kitayama, Markus, & Nisbett, 1998; Kunda, 2001). It could be argued that the Western personnel

psychological paradigm suffers from the fundamental attribution error in the sense that situational constraints on or aids to an individual's performance are not controlled in the typical validation study. Rather, an individual's performance is conceived of as a stable disposition-like state on which people can be ranked and decisions can be taken, regardless of the fact the individual's performance might temporarily be at a low, due to any number of situational factors that are beyond his or her control, such as unwanted disruptions, being the target of bullying, faulty hardware, etc. It is not entirely unlikely that the interdependent rater, who appears to be more aware of the context, who is motivated to maintain group harmony, and who tends to favor members of the ingroup, will resort to artificially inflating such an individual's performance. Within the Social Relations Model, such inflation would be reflected in a decrease in variance attributed to the target.

A factor that could be postulated to lead to *greater* target variance in interdependent cultures lies in the fact that people from interdependent cultures appear to have richer representations of close others. Indeed Kunda (2001) states that people in interdependent cultures "…whose key social tasks include fitting in with others and reading their minds to anticipate their expectations may accumulate detailed knowledge about close others. Their knowledge of others may be as rich or richer than their self-knowledge" (p. 521). In his review of extant research on generally low levels of target variance in studies employing the Social Relations Model in independent cultures, Kenny (1994) states that "judges do agree with one another, especially when they have information about the target" (p. 75). With people in interdependent cultures having a richer knowledge about others, it follows from Kenny's statement that the target variance in interdependent cultures should be higher than the target variance that is typically found in independent cultures. This should be especially so when raters have been exposed to the same cues and have considerable overlap in their representation of the target (cf. Kenny, 1994), as could be expected when raters are members of a workgroup or team and are rating one another's performance.

6.8 Predicting the target variance component in round robin ratings of performance collected in interdependent cultures

In summarizing the above, it can be stated that based on current theory, it is unclear whether there will be more or less target variance in interdependent cultures as opposed to independent cultures. Yet, it was also argued that individual differences variables could be expected to relate stronger to the target variance component (irrespective of its size relative to the other variance components) than to self or peer ratings of job performance, since perceptual contamination that is not attributable to the target has been statistically removed. As mentioned earlier the study that is presented below was carried out among trainees at the South African Police Services (SAPS). According to Gatewood and Feild (1998) the use of training criteria in validation research is highly desirable because of the increased control that it affords to the selection specialist. The two sources of control they distinguish between are the amount of standardization possible within the training context, and the fact that "validity coefficients between predictors and training measures are oftentimes more direct indicators of the relationship between KSA [i.e., knowledge skills and abilities] and work level than are the validity coefficients using other criterion measures" (Gatewood & Feild, 1998, p. 667).

In choosing our predictors it was decided to take note of (meta-analytic) findings in a) the prediction of training performance (Barrick & Mount, 1991; Hurtz & Donovan, 2000; Salgado, 1997), b) the prediction of police job performance (Barrick & Mount, 1991), c) the prediction of job performance in South Africa (Rothman, Meiring, & Barrick, 2002), and d) cross cultural invariance of the Five Factor Model (FFM) 5(Salgado, Moscoso, & Lado, 2003a). These studies provide the most consistent support for conscientiousness, extraversion and emotional stability in predicting police training performance among members of the various ethnic groups in South Africa. Based on interviews with SAPS psychological services, it emerged that a high degree of stress tolerance and high levels of commitment to the training program were found especially vital to trainees' completion of the training program. Because of this, and due to restrictions on overall questionnaire length, it was decided to choose for the FFM dimensions of emotional stability and conscientiousness as predictors of SAPS trainees' performance.

Finally, although less directly relevant than target variance to the applied personnel psychological perspective, a consideration of perceiver variance and relationship variance will lead to a greater theoretical understanding of the perceptual processes in the performance rating process. As mentioned earlier, perceiver variance is that part of the variability in a perceiver's ratings that is stable across ratees. Kenny (1994) states that the perceiver effect reflects the view that persons being evaluated "are all alike" (p. 45). In independent cultures where the self is thought to be represented more richly than others (Kunda, 2001), each individual may indeed more likely acquire and rely on his or her own simple stereotype of the generalized other (cf. Kenny, 1994), as opposed to interdependent cultures where people are thought to have richer other representations (Kunda, 2001). These richer other representations may be posited to lead raters in interdependent cultures to rate different targets more idiosyncratically than raters in interdependent cultures would rate different targets. Thus, it can be expected that the perceiver variance, which refers to the extent to which a perceiver sees targets in general as being high or low on a trait (Kenny, 1994), in interdependent cultures should be less high than that typically found in Western cultures. Rather than being reflected in perceiver variance, it can be expected that the rich other representations that people in interdependent cultures are thought to have are likely to become manifest in an inflated relationship variance relative to independent cultures. Kenny (1994) on the basis of Ash's (1946) seminal work, has suggested that perceivers integrate information about others in an active and complex manner, and draws a parallel with stories or narratives that are composed on the basis of perceived behavioral information. With perceivers having access to a richer representation of specific others, the stories they concoct about them in the rating process, can be expected to be idiosyncratic to each rater-ratee relationship. Such idiosyncrasy would be reflected in an inflated relationship variance in interdependent cultures relative to what is generally found in independent cultures.

6.9 Research questions

We conclude this introduction with two research questions that are investigated in the empirical section of this chapter below.

1. How will the sizes of the target, perceiver and relationship variance components in South Africa compare and contrast with the sizes of these variance components in previous research in independent cultures?

2. How will emotional stability and conscientiousness, the two selection context individual differences variables included in this study, relate to target variance, and how will these correlations compare and contrast with the correlations of the independent variables with self-rated and averaged peer ratings of performance?

In order to answer these questions, a validation study was conducted that employed the Social Relations Model to assess the performance of trainees at the SAPS. The details of this study are described below.

6.10 Method

Procedure

Data were collected in a two-week period in October 2005 at the Police Service Training College Pretoria of the South African Police Services (SAPS). Upon arriving at the training college three and a half months earlier, each of the 2025 trainees had been assigned to one of 55 same-sex platoons that consisted of approximately 37 members each and that completed the various police training modules on a rotating daily schedule over a total six month training period.

Upon entering the classroom, platoon members were instructed to sit in their naturally occurring workgroups that consisted of approximately six members each, after which they were explained that the purpose of the research project was to improve the selection process of trainees that would be admitted to the SAPS training in subsequent years. In addition, respondents were informed that their answers would be treated in accordance with the ethical guidelines set forth by the American Psychological Association (APA, 2002), that their answers would remain confidential and not be shared with anyone, including the training college administration, and were asked whether they had any questions regarding the purpose of the study. Subsequently respondents received detailed instructions about how to complete the different parts of the questionnaire which took the trainees approximately 90 minutes

to complete (depending on the number of workgroup members). Time allowed to trainees to complete the questionnaire was increased from one to one and a half hours after the first day of testing, due to the fact that it emerged that some trainees took longer than expected. Participation was mandatory.

Participants

All of the 2025 respondents who were being trained at the facility participated in the research project. Demands on SRM data are quite stringent in that there can be no missing values. Data therefore had to meet the following conditions. First, no more than one percent of the data for any respondent could be missing (missing values for respondents who missed less than one percent were replaced by the scale mean). Second, respondents had to have rated all of their team members. Third, all of the team members had to have rated every respondent. Fourth, it was decided to exclude Whites from participation, since it was expected that these respondents would tend to construe the self more independently. From the original population of 2025, data from a final sample of 816 trainees from 176 intact teams were analyzed.

The final sample thus consisted of 816 (75.9% male) respondents who had an average age of 26.07 years (SD = 2.74). The majority of the sample was populated by Blacks (97.2%), followed by Coloureds (1.6%), and Asians (1.2). Of the respondents, 28.6% were of North Soto descent, followed by Tswana (19.6%), Tsonga (10.7%) and Zulu (10.7%), Venda (7.2%), Swazi (7.1%), South Soto (5.6%), Ndebele (4.7%), Xhosa (2.3%), English (2.3%), and Afrikaans (1.2%). Although English was not the mother tongue of the majority of the sample, respondents had been pre-selected on their fluency in English and the successful attainment of a senior (grade 12 equivalent) high school certificate. The 816 respondents participated in the research project as members of 176 groups with an average group size of 4.64.

Measures: Independent variables

Emotional Stability. Trainees' degree of emotional stability was assessed using a selection of ten items from the 35 item Basic Traits Inventory (BTI) Neuroticism scale (Taylor, 2004). These neuroticism items were recoded to reflect emotional stability. Items were selected to so that each facet, namely, affective instability, depression, self-consciousness and anxiety was equally represented. An example of a BTI Neuroticism item is "I find it difficult to control my feelings".

Conscientiousness. Trainees' degree of conscientiousness was assessed by a selection of ten items from the 35 item BTI Conscientiousness scale (Taylor, 2004). Items were selected so that each conscientiousness facet, namely, effort, order, dutifulness, patience, prudence, and self-discipline, was equally represented. An example of a BTI Conscientiousness item is "I put extra effort into the work that I do".

Measures: Dependent Variables

Training performance was assessed within the Round Robin SRM framework, so that every team member rated their own performance and the performance off all of their (other) team members on the same 24 items. Because not all of the teams were of the same size ($\overline{N} = 4.64$, *SD = .76)*, the overall length of this section could vary in multiples of the 24 items that were used to assess training performance of the team members. These items were rated on a five-point scale ranging from (--) *very ineffective* to (++) *very effective*. Items were developed to reflect six conceptually interrelated training performance sub-dimensions that were deemed to sufficiently reflect the criterion domain of SAPS trainees after extensive discussions with 1) a Dutch police selection specialist, 2) a senior level researcher at SAPS psychological services, 3) the senior management of the SAPS Pretoria college, 4) training instructors at this college and 5) a number of trainees. Three of the six sub-domains, namely, conflict resolution, collaborative problem solving and communication were chosen to reflect Stevens and Campion's (1999) interpersonal knowledge, skills and abilities (KSA's). Example items for these were "Ending disagreements that would prevent the team from reaching its objectives", "Knowing how to work together to get the job done efficiently" and "Communicating in a way that helps rather than gets in the way of fulfilling team goals", respectively. Four items were developed to reflect Pulakos and colleagues' (Pulakos et al., 2000; Pulakos et al., 2002) physically adaptive performance dimension, an example item being "Adjusting weight and physical strength to meet training requirements". Finally items were developed to reflect counterproductive work behaviors and interpersonal performance constructs (Ones, Cullen, Drees, Viswesvaran, & Langkamp, 2003, April), example items being "Having control over one's impulses (e.g., being aggressive, abusing substances or using excessive unnecessary force)" and "Responding appropriately to supervision", respectively.

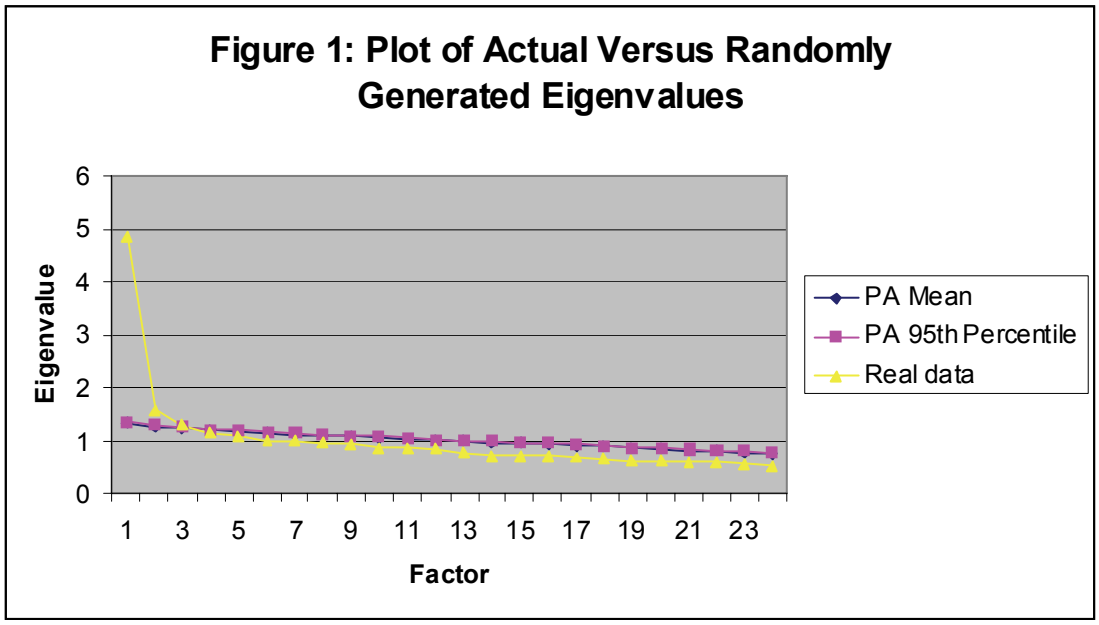
Since there was considerable conceptual overlap in the six training performance sub-domains, an exploratory principal components analysis was used to examine the underlying structure of the 24 self-rated performance items. Using Parallel Analysis (PA) on 100 randomly generated datasets as a decision tool for factor retention (see Hayton et al., 2004), a three factor solution was determined to best fit the data (see Figure 1). Parallel analysis may be used to provide a more accurate and objective factor retention method over more traditional methods such as the Scree plot (see for example Loehlin, 1987). Items loadings for the factors are shown in Table 1. The first two factors explained a total of 26.1% of the variance in performance ratings and were named "Interpersonal Skills" (9 items, $\alpha = .71$) and "Rule Compliance" (6 items, $\alpha = .55$), respectively. We were not overly concerned with the fact that this last factor failed to meet Nunnally and Bernstein's (1994) $\alpha > .70$ criterion, because of the ability of the Social Relations Model to analyze only construct stable variance (cf. Greguras et al., 2007). It was decided to retain only the first two factors of the three-factor solution for further analyses because the third factor was not easy to interpret.

6.11 Results

Variance partitioning

Kenny and Xuan's (2004) SOREMO software package was employed to decompose the variability in trainees' round robin ratings of training performance into the target, perceiver and relationship variance components. The relative stable variance partitioning of the Interpersonal Skills and Rule Compliance factors is shown in Table 2. Within the Social Relations Model, these relative variances are interpreted as the percentage of variance in each rating that is attributable to each of the variance components. Across the two performance dimensions and all of the groups ($g = 176$, $n = 816$), approximately 3 percent of the variance in ratings may be attributed to the target effect, 18 percent to the perceiver effect, and 15 percent to the relationship effect. As such, the target variances in Table 2 appear to be extremely low in comparison to the findings within independent cultures that were discussed earlier, namely 15% target variance, 20% perceiver variance, and 20% relationship variance (Kenny, 1994). Although SOREMO conducts significance tests on item level variance

Figure 1: Plot of actual versus randomly generated Eigenvalues



Note. Parallel Analysis (PA) mean and Parallel Analysis 95th percentile values were computed on the basis of parallel factor analyses conducted on 100 randomly generated datasets that corresponded to the real data in terms of sample size (n), the number of items, and the number of scale points. The decision rule for factor retention is to retain only those factors whose Eigenvalues are greater than those calculated on the basis of the random data (Hayton, Allen, & Scarpello, 2004).

components, it does not provide such output on the construct level (Kenny, 1998). The group level absolute variance components were therefore outputted and tested for their statistical significance using standard formulae obtained from Kenny and La Voie (1984). The tests of the variance components reported in Table 2 indicated significant target, perceiver and relationship variance. Thus, although the target variance component was about one fifth of that typically found in Western cultures, it appears that the results are unlikely to be a random or chance artifact. Our findings for the perceiver and relationship variance component were comparable albeit slightly lower than Kenny's figures for Western research on the Social Relations Model (i.e. 18% perceiver variance in our study versus 20%, and 15% relationship variance in our study versus 20%). Thus, with regards to the first research question, it can be concluded that although the perceiver and relationship variance components in interdependent cultures seem to be roughly equal to those typically found in

Table 1

Item Loadings for Two Training Performance Factors

	Factor I	Factor II	Factor III
Establishing friendly relations with platoon members	.608		
Checking to make sure that communications from others are understood by oneself and others	.587		
Communicating openly	.577		
Stimulating others to share ideas that help fulfill team goals	.569		
Knowing how to work together to get the job done efficiently	.541	.332	
Solving difficulties that are part of working in a team	.516	.368	
Acting as a go-between to make sure things do not get out of hand	.513		
Encouraging differences of opinion when these are helpful for the team to fulfill its goals (for example to broaden the team's perspective)	.486		
Being socially sensitive and an easy person to talk to	.416		
Listening to people without wrongly judging them	.399		
Being fair towards platoon members.	.388		
Becoming proficient in performing the physical tasks as necessary for the completing training requirements		.648	
Adjusting weight and physical strength to meet training requirements		.551	
Respecting SAPS regulations		.484	
Sticking to agreements made with others		.450	
Being socially aware (e.g., knowing when and how to be firm)		.445	
Responding appropriately to supervision		.347	.312
Communicating in a way that helps rather than gets in the way of fulfilling team goals		.340	
Having control over one's impulses (e.g., being aggressive, abusing substances or using excessive unnecessary force)			.611
Quickly spotting the cause of harmful disagreements among team members			.539

Table 1 (Cont'd)

Item Loadings for Two Training Performance Factors

Knowing when it is best to work alone and when it is best to work together			.476
Frequently pushing self (e.g., physically to complete strenuous or demanding tasks)		.427	.443
Ending disagreements that would prevent the team from reaching its objectives			.440
Adjusting to challenging environmental states (such as extreme heat, humidity, and cold)			.381
Percentage of variance explained by Factor I	19.42		
Percentage of variance explained by Factor II		6.64	
Percentage of variance explained by Factor III			5.59

Note . Factor loadings have been rounded to two decimals and are ordered in relative size. Factor loadings >.30 have been suppressed for ease of interpretation. Loadings to which the item was assigned have been underlined. The first factor was named "Interpersonal Skills" and the second factor "Rule Compliance". The third factor was difficult to interpret, and was therefore not included in subsequent analyses.

Table 2

Relative Stable Construct Variance Partitioning for the Two Criteria

Construct	Target Variance	Perceiver Variance	Relationship Variance	Residual Variance	Total Absolute Variance
Interpersonal Skills	.038	.184	.184	.594	.407
Rule Compliance	.019	.180	.113	.688	.312
Across Dimensions	.029	.182	.149	.641	.360

Note. All variance components are significantly different from zero at $p < .05$. Relative variances are reported for ease of interpretation but the significance tests of the variance components were performed on the absolute variance components. Based on a sample (N=816) of 176 groups with an average group size of 4.64 .

independent cultures, the target variance component appears much lower than that typically found in independent cultures.

Predictive validities of emotional stability and conscientiousness on the target variance components

Next, it was examined whether the individual differences predictors that were included within this study, namely, emotional stability and conscientiousness were related to the target variance component. As stated in research question 2, we were also interested in comparing and contrasting these results to the relationships between the aforementioned individual differences variables and more conventional criterion measurement strategies (namely self-ratings and average other ratings). However, the SOREMO package calculates disattenuated correlations, which take into account the reliability of the actor and partner effects and these can not be tested for their statistical significance at the construct level (Kenny, 1998). Since the stable absolute construct level target variance component could also not be outputted on the individual level (i.e. SOREMO only provides variance components as output at the item level), it was therefore decided to rerun the variance decompositioning, but this time entering the scale means for Interpersonal Skills and Rule Compliance rather than the scores on the nine and six items respectively. This was somewhat unfortunate, since it meant that the relationship effect could now not be distinguished from the residual (or unstable) variance. However with regards to our second research question, we were mainly interested in the target variance component. As could be expected, these construct level stable absolute target variance components closely mirrored the findings that were obtained using item-level scores (i.e., they were the same to two decimals).

Table 3 shows that the effects of emotional stability and conscientiousness on the target variance components of Interpersonal Skills and Rule Compliance were all significant. Hurtz and Donovan (2000), in their meta-analysis on the relationship between the Five Factor Model and job performance, report operational validities of emotional stability and conscientiousness on interpersonal facilitation and job dedication, two constructs that appear highly similar to the Interpersonal Skills and Rule Compliance factors that were included in the present investigation. They report

'true' operational validities of emotional stability (ρ_v = .16; .13) and conscientiousness (ρ_v = .16; .18) on interpersonal facilitation and job dedication, respectively. It is interesting to note that Hurtz and Donovan's findings seem to be most closely mirrored in the predictive validities of emotional stability and conscientiousness onto the target variance components, as opposed to the predictive validities of the FFM dimensions onto the self ratings and average other ratings. These findings lend support to the predictability of SAPS trainees training performance on the basis of emotional stability and conscientiousness. Thus, although the relative amount of target variance was quite low, cross target variability in

Table 3
Predictive Validities of Emotional Stability and Conscientiousness on the Target Variance, the Self Rated and the Average Other Rated Criterion

	Target Variance		Self Ratings		Average Other Ratings	
Independent Variable	Interpersonal Skills	Rule Compliance	Interpersonal Skills	Rule Compliance	Interpersonal Skills	Rule Compliance
Emotional Stability	.18**$_{a}$	.15**	.17**$_{b1}$	.23**$_{cd2}$	.08*$_{abce3}$	.15**$_{de4}$
Conscientiousness	.10**$_{fghij}$	.16**$_{fklm}$	.38**$_{gkno1}$	.33**$_{hlpq2}$	.20**$_{inp3}$	.25**$_{jmoq4}$

Note. * p < .05; ** p < .01 (one-tailed). Correlations with the same single digit subscript are significantly different (p<.05, two tailed) with subscript letters denoting row (or horizontal) comparisons and subscript numbers denoting column (or vertical) comparisons. No diagonal comparisons were made, since these would involve both different predictors and criteria.

consensus in peer ratings could be predicted on the basis of these two FFM factors, and the findings closely reflect meta-analytic findings for the relationships of emotional stability and conscientiousness with interpersonal facilitation and job dedication. It should be noted that conscientiousness and emotional stability were moderately correlated (r = .28, p < .01, n = 816). Upon examining the effects of emotional stability and conscientiousness in predicting self rated training performance and average other rated performance, it emerged that these correlations were all significant as well (see Table 3).

Subsequently, it was examined whether the correlations of emotional stability and conscientiousness with the target variance in Interpersonal Skills and Rule Compliance displayed a different pattern than the correlations of these predictors with self rated and average other rated performance in Interpersonal Skills and Rule Compliance, respectively. All of the comparisons that are discussed below were made

using a formula for testing the equality of dependent correlations where one variable is in common (Brannick, 2004).

As for emotional stability, only the correlations with target variance in Interpersonal Skills and average other ratings in Interpersonal Skills were significantly different, in that the former was higher than the latter. Yet, upon comparing the correlations between conscientiousness and the two target variance components with the correlations between conscientiousness and the two self rated training performance dimensions and the two average other rated training performance dimensions, the predictive validities onto the target variance component appeared to be generally lower. This difference was significant in seven out of a possible eight cases. In light of the previously discussed Hurtz and Donovan (2000) findings, our reading of the differences between the predictive validities onto the target variance components and the self-rated dimensions is that this reflects common method variance. Thus the relatively high correlations of conscientiousness with self rated performance in Interpersonal Skills and Rule Compliance must be interpreted with considerable caution.

Caution is also warranted in interpreting the correlations of conscientiousness with the average other rated performance dimensions, since these are also significantly higher (in three out of four of the comparisons made) than correlations of conscientiousness with the two target variance components and appear generally higher than the previously discussed true operational validities reported by Hurtz and Donovan (2000). As stated within the introduction, the target variance components reflect the most perceptually decontaminated measure of training performance available. It appears from these findings that there is covariance between conscientiousness and average other ratings in training performance that is unrelated to the targets' latent performance. Perhaps this covariance derives from a correlation of conscientiousness with the relationship variance component that is presumably present within the average other ratings. Unfortunately, and as mentioned earlier, we could not investigate this hypothesis any further.

Next, differences in predictive validities between conscientiousness and emotional stability onto the different performance measures were assessed. Upon examining these differences for the self rated and average other rated performance dimensions, one would be tempted to conclude that conscientiousness is a better predictor of the two training performance measures in both cases, since the predictive

validities of conscientiousness are consistently significantly higher than the predictive validities of emotional stability. Yet, upon examining differences in predictive validities of these variables onto the two target variance components, a different picture emerges. Here none of the differences in predictive validities were significant, although it appears that the consistent pattern that was found for the self-ratings and average other ratings is reversed for the Interpersonal Skills target variance component. It is interesting to note that although Hurtz and Donovan's (2000) meta-analytic findings for the relationships between conscientiousness and emotional stability on job dedication and interpersonal facilitation seem to be most closely reflected by the predictive validities of these FFM dimensions onto the target variance component, there appear to be very slight differences. That is, Hurtz and Donovan found equal operational validities for emotional stability and conscientiousness on interpersonal facilitation, while we found emotional stability to be a slightly better predictor of Interpersonal Skills, although this difference was not significant. In addition, Hurtz and Donovan, found conscientiousness to be a slightly better predictor of job dedication than emotional stability, while this finding was less pronounced for our results regarding the Rule Compliance target component.

6.12 Conclusion and discussion

Within the introduction, a number of issues were raised that related to performance measurement in interdependent cultures, and it was argued that Kenny's Social Relations Model might be successfully employed within such cultures to accurately assess performance for purposes of validating selection context predictors. On the basis of our findings among trainees at the South African Police Services (SAPS) it appears that the Social Relations Model may not only be used for this purpose, but also to gain insight into the perceptual processes that are intrinsic to any performance assessment using ratings. Our findings indicate a startlingly low percentage of variance in SAPS trainees' training performance is attributable to the target (i.e. the person who is evaluated). In other words, it appears that targets did not want to differentiate between one another's levels of training performance. This finding is consistent with the cultural psychological literature, where it has been stated that such differentiation may lead to disruptions to group harmony (Aycan &

Kanungo, 2001; Davis, 1998). Across the Interpersonal Skills and Rule Compliance scales, it emerged that approximately three percent of variability in ratings is attributable to the person being evaluated. Comparisons of our findings with Social Relations Model findings in general (cf. Kenny, 1994) and Social Relations Model findings for performance in particular (cf. Greguras et al., 2007), reveal that the relative sizes of the target variance components reported here were respectively about one fifth and one fourth the size of findings in previous research conducted in independent cultures. Despite this, the absolute target variances for both Interpersonal Skills and Rule Compliance were significantly different from zero. Comparisons of our findings relating to the perceiver and relationship variance components indicated that these were only slightly smaller than those found in previous research in independent cultures. Not surprisingly from their sizes relative to the target variance components, the perceiver and relationship variance components for Interpersonal Skills and Rule Compliance were found to be significantly different from zero as well. It thus appears that although respondents seem to have avoided differentiating between one another, the degree to which "that which is in the eye of the beholder" (i.e. the perceiver effect) and the degree to which variance in performance ratings reflect the relationship effect are more similar to those typically found in independent cultures.

As for the predictive validities of the two selection-context predictors included within this study, namely emotional stability and conscientiousness, it was found that these were all significant both for the Interpersonal Skills and Rule Compliance scales. Findings for the predictive validity of emotional stability onto the target variance component were comparable in size to findings obtained using more conventional rating sources investigated within this study, namely self-ratings and average other ratings of training performance. The findings for the predictive validity of conscientiousness onto the two target variance components was less comparable to findings obtained using the more conventional rating sources in that they appeared be significantly lower, although they do seem to corroborate the meta-analytic findings for the operational validity of conscientiousness on job dedication and interpersonal facilitation that are reported by Hurtz and Donovan (2000). It thus appears that the target variance validities for conscientiousness are more accurate estimates than the validities obtained by the more traditional means of assessing performance (i.e., self ratings and average other ratings). It should be noted that although Hurtz and

Donovan did not address the issue of performance rating source (i.e., self, other, average other etc.) in their study, they did control for measurement artifacts. As such their meta-analytic estimates are likely to more closely reflect true validities than single empirical studies.

In our opinion, the findings reported here contribute to the extant literature in several ways. First, to our knowledge the current endeavor was the most comprehensive investigation into performance assessment in an interdependent culture ever conducted. Although this study has several limitations, which will be discussed in detail below, our findings seem to indicate that when raters in interdependent cultures are asked to evaluate a peer, less of the variance in their ratings may be attributable to the peer's actual performance than in independent cultures. The low consensus reported here could be attributed to an unwillingness on the part of trainees to highlight differences in the performance of their peers, to the fact that people in interdependent cultures appear more prone to making situational attributions (and less prone to making the fundamental attribution error), or to both. These findings do not lend support to the idea that the richer other representations that people in interdependent cultures are thought to have lead to more accurate and consensual ratings. That is, if the trainees had relied on their supposed richer other representations in evaluating their peers, one would expect these richer other representations to more accurately reflect the targets' actual standing on the assessed performance dimensions. This in turn would have led to a much greater consensus among trainees than that reported here.

Second, to our knowledge, the current investigation was the most comprehensive study ever into the Social Relations Model, and only the second study to apply SRM to the assessment of performance in the personnel psychological research arena. One worrying finding that deserves further discussion in this regard is that in relation to conventional methods of performance measurement, namely self ratings and average other ratings, the predictive validity of conscientiousness onto the Interpersonal Skills and Rule Compliance target variances appears considerably, indeed significantly, lower. A likely explanation for this finding is that there was simply very little target variance for conscientiousness to account for. Yet, the predictive validities of conscientiousness for the average other ratings, that were based on the exact same data were significantly higher for both performance dimensions, although less in line with the findings that have been reported in previous

(meta-analytic) research in independent cultures (Hurtz & Donovan, 2000). This suggests that variance in the average other ratings that is unrelated to the targets' latent performance can be explained by conscientiousness. Theoretically, this variance must be attributed to the relationship variance component, since an explanation in terms of perceiver variance is not viable. That is, an explanation in terms of perceiver variance would mean that a targets' self-rating on conscientiousness is related to how the (average) other perceives others in general. An explanation in terms of a targets' unique relationships with the raters is more plausible. Kenny (1994), in discussing the relationship effect, states that "the notion of 'love at first sight', and the idea that liking is not so much a property of the target, but rather reflects something *between* people suggest that liking or affect is primarily relational" (p. 84). Although performance is likely mostly a property of the target, an interesting question in this regard is whether the relationship variance component presumably still present within the average other ratings represents some form of mutual respect or even *Ubuntu*, predicted by conscientiousness, and not present within the target variance component. Unfortunately, the SOREMO software package that we utilized did not allow for the computation of correlations between conscientiousness and the relationship variance component. This brings us to the limitations of the current study and suggestions for further research.

Limitations and suggestions for further research

Although studies in employing the social relations model have many scientific merits, there are also several drawbacks that stem directly from its use. First, there is currently no standard way to impute values for missing data within the round robin design and Kenny suggests "common sense is needed in developing a reasonable missing data strategy" (Kenny, 1998, p. 13). Since our original sample was of a considerable size, it was decided to be strict and retain only those individuals and groups that met the criteria that were described within the results section. As all data within round robin designs are interdependent and the removal of one or more cases from the group because of any of the criteria, this oftentimes meant that the group size dropped below the minimum of four persons so that the whole group had to be deleted because one person within the group did not meet any one of the criteria. For instance, the removal of 39 whites from the sample meant an overall reduction in number of groups from 192 to 176 and a reduction in sample size from 901 to 816. Although this

missing data strategy was quite rigid and led to the loss of a considerable number of trainee data, it was felt that this strategy was far superior than introducing subjectivity by imputing a number that might have led to an artificial inflation or deflation of the sizes of any of the variance components. In doing so, it was assumed that respondents who were removed due to the missing data of a team member would not differ in their answers from respondents who remained in the sample. Another reason for employing this strategy was the fact that in practice it turned out that the SOREMO software package is capable of handling a maximum of 200 groups. In case a viable method of imputation had been devised, this number would have been exceeded and it would have been unclear how to combine the results from several variance decompositioning runs.

A second limitation of employing the social relations model in assessing the performance of trainees was that the number of items needed increased by a factor equal to the group size relative to single rater evaluations. A total of twenty-four items were used to assess the performance of a single person. For the data collected within the current study this meant that trainees had to complete up to 168 items within the largest groups consisting of seven members for the performance evaluation section only. Unfortunately, it is unclear to what extent subjects' missing data reflected an unwillingness of trainees to distinguish differences in one another's performance, or whether they were missing due to time constraints.

Because of the fact that so many items were needed for the performance evaluation section, it was decided not to put an extra burden on trainees by directly assessing their levels of interdependent self-construal. Rather this was inferred on the basis of the extant literature about collectivism, interdependent self-construal and *Ubuntu*. A suggestion for future research in this regard would be to investigate the relationship between interdependent self-construal and the variance components more directly. Further research should set out to replicate these findings in other interdependent cultures. Such studies would also benefit from an independent culture comparison group that is as similar to the interdependent group as possible. Such research might be carried out within single occupations within single (multinational) organizations.

If you are going through hell
Keep going.

-Sir Winston Churchill (1874-1965)

Chapter 7

Conclusion and discussion

The current dissertation presented four empirical studies and one theoretical investigation that are situated at the intersection of cross cultural psychology and personnel psychology. This final chapter will seek to integrate the findings of the various studies along the lines of Binning and Barrett's (1989) elaborated model for personnel selection research that was discussed in the introductory Chapter 1. It will also attempt to answer the three research questions that were raised in the introduction. Finally, this chapter will attempt to highlight some of the limitations of the studies that were presented here and address some potential avenues for future research.

7.1 Integration of the findings into the Binning and Barrett (1989) model

In this section, an attempt will be made to integrate the findings that were presented within the confines of Chapters 2-6 into the Binning and Barrett (1989) model. Subsequently, each of the three research questions that were raised within the introduction will be answered. Finally, this chapter concludes with a discussion of the limitations of studies presented within this dissertation and a discussion of possible avenues for future research.

After the introductory chapter, Chapter 2 presented the findings of a meta-analysis into selection context predictors of expatriate job performance. Based on 30 primary studies and a total sample size of 4046, it was found that all of the Five Factor Model (FFM) personality dimensions, with the exception of openness, were predictive of expatriate job performance. Moreover, the magnitudes of the predictive validities were equal to or surpassed those reported in meta-analyses that had been based on studies that employed domestic employees. Besides providing corroboratory evidence for the usefulness of the FFM in predicting job performance, the study also found support for expatriate specific predictors of expatriate job performance. Cultural sensitivity and local language ability emerged as the most clear specific predictors. In addition, cultural flexibility, selection board ratings, tolerance for ambiguity, ego strength, peer nominations, ethnocentrism, task leadership, people leadership, social adaptability and interpersonal interest emerged from exploratory meta-analyses, for which fewer than four effect sizes were available in the extant literature. The meta-analysis provided considerable support for the criterion related validity of various predictor measures and the expatriate job performance criterion (i.e., The Binning and Barrett (1989) inferences 5 and 8 that are depicted in Figure 1).

Homogeneity of a meta-analytic finding in combination with a sample weighted correlation whose confidence interval excludes zero, may be interpreted as convergent evidence for inferences 5 and 8, by providing support for inferences 17, 18 and 19. That is, the technique of meta-analysis specifically sets out to statistically combine alternative predictor measures and alternative criterion measures. When the

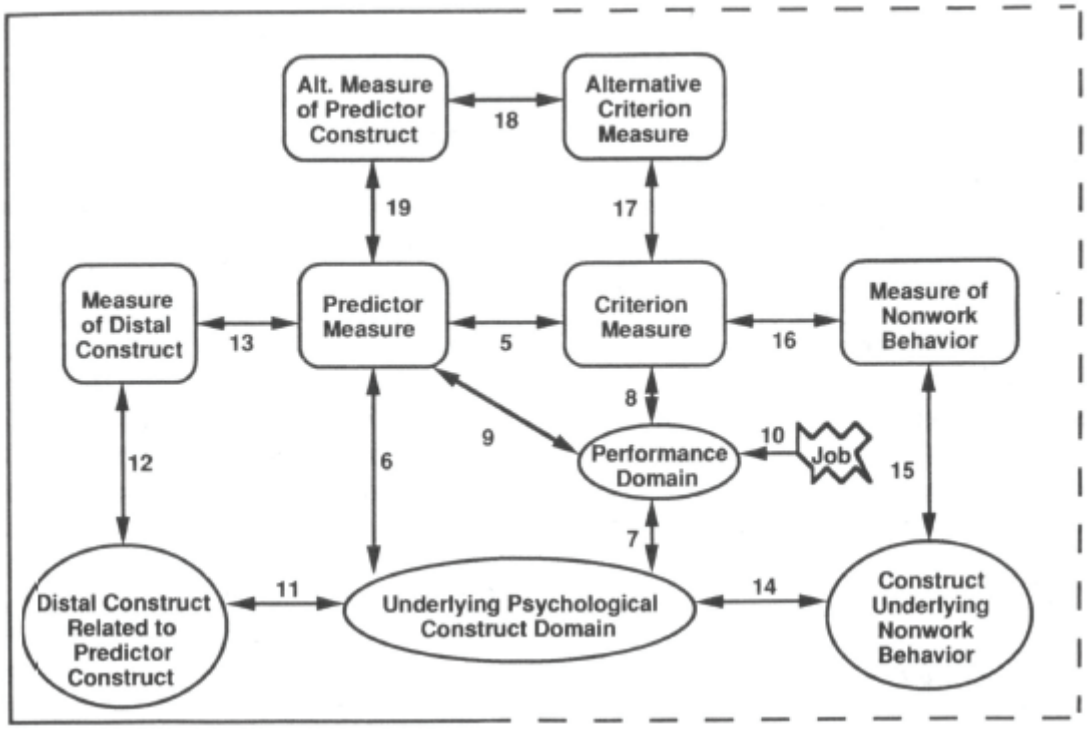


Figure 1: Binning and Barrett's (1989) elaborated model for personnel decision research.

Note. The numbering of the arrows starts with five because Binning and Barrett started numbering in an earlier figure. From Binning, J.F. and Barrett, G.V. (1989). Validity of personnel decisions: A conceptual analysis of the inferential and evidential bases. *Journal of Applied Psychology, 74*(3), 478-494. ©1989 American Psychological Association. Reprinted with permission.

same construct (e.g., emotional stability) is investigated in relation to the same criterion (i.e., expatriate job performance) across studies and the effect is found to be nonzero and indistinguishable (i.e., homogeneous) across studies, this could lead one to conclude that inferences 5 and 8 have been supported. It should be noted that the arguments that are advanced here ignore the possibility that all studies suffer from a systematic sampling error, which might also lead to homogeneous results. However, since one of the goals of meta-analysis is to reduce sampling error by aggregating results across studies, and since the samples included in the meta-analysis were diverse in terms of the expatriates' host countries, home countries and even occupations, this is unlikely to have been an issue.

Although the focus of the meta-analysis was on the criterion related route of validation (inferences 5 and 8), what can we say about other inferences in Binning and Barrett's (1989) model based on the meta-analysis? It would be unlikely for the primary studies to find a statistically indistinguishable (i.e., homogeneous) relationship between a certain predictor measure and a criterion measure (i.e., inference 5), when the predictor measure in some studies did not adequately sample the underlying psychological construct domain (inference 6). It would be equally unlikely for studies to find such an indistinguishable relationship when the criterion measure in some of the studies did not adequately sample the performance domain (inference 8). Finally, it would be unlikely to establish homogeneity when the performance domain is actually unrelated to the underlying psychological construct domain (inference 7) in some studies. Thus, the construct-related validation route is supported by these findings, albeit not fully conclusively.

As it turned out, however, quite a few of the effects (namely the effects for extraversion, emotional stability, openness, agreeableness, local language ability, prior international experience, English language ability, ethnocentrism, people leadership and locus of control) were found to be heterogeneous. For the FFM dimensions, performance rater type (self vs. other) was not supported as a moderator. No other moderators could be investigated due to the small number of primary studies. When the findings of our study that examined the prediction of multidimensional expatriate job performance (Chapter 4) were included in the meta-analysis, the relationship between conscientiousness and expatriate job performance too, was found to be heterogeneous. Thus, the fact that most of the predictors demonstrated heterogeneous relationships with the criterion, does not lead to straightforward support for inferences 6, 7, and 8. Had all studies found indistinguishable or similar and clear relationships between a particular predictor and an expatriate job performance criterion, this would have constituted direct support for these inferences.

There are a myriad of possible moderators besides rater type, yet the limited number of studies that were included in the meta-analysis restricted the kinds of moderators that could be investigated. In fact each of the inferences 17-19 could have been the culprit for the heterogeneous findings of the meta-analysis. For example, the fact that the primary studies were conducted in different countries using expatriates

with different jobs and nationalities may have caused measurement nonequivalence of either the predictor (inference 19) or the criterion (inference 17) measures included. The different cultural settings in which many of the studies were conducted and the fact that expatriates within these studies were usually from many different countries could have introduced unwanted variability in the distributions of effect sizes that were subjected to meta-analysis. Another possibility is that the magnitudes of the relationships between the included predictor measures and criterion measures varied as a function of expatriate nationality, expatriate job type, or host country. We will return to this issue below. In summary, although inferences 5, 6, 7, and 8 were partially addressed in Chapters 3 and 4, future research should endeavor to further support these inferences. According to Binning and Barrett (1989) further support for inferences 6 and 7 may be obtained by using both convergent and discriminant strategies. They state that convergent evidence exists when a) different operationalizations of the same construct demonstrate an empirical relationship, b) people's differing test scores on the operational measure can be predicted on the construct level, and c) operationalizations of constructs that can be expected to be theoretically related to the construct in question demonstrate an empirical relationship. Discriminant evidence exists on the other hand when operationalizations of constructs do not relate to operationalizations of different constructs that are not expected to be related. Further support for inference 5 may be generated by empirically investigating relationships between predictor measures and criterion measures, and further evidence for inference 8 may be generated by further theoretical justification of this relationship.

It should be noted here that discussion of information relevant to the detection of moderators is by no means standard practice within the field of Industrial and Organizational Psychology despite the fact that this is a major issue to be addressed (Cortina, 2003). Indeed, Cortina on the basis of his review of 59 meta-analyses published in the *Journal of Applied Psychology* between 1978 and 1997 found that only 37% of the meta-analyses reported on within these studies were accompanied by information relevant to the detection of moderators. An interesting case in this regard is the highly cited meta-analysis of Barrick and Mount (1991), who state in their introduction that "Our purpose in the present study is to understand the true score correlations between the personality dimensions and job performance criteria for

different occupations and to assess the presence of moderators" (p. 11). Curiously, this is the final mention of the word "moderator" within their article. Applying the decision rule that we used in our meta-analysis and which we obtained from Schwarzer (1989) to the findings pertaining to the meta-analytic results for personality performance relations within different occupations that Barrick and Mount (1991) report in their Table 2 reveals the following. Of the 23 out of their 30 meta-analyses in which the residual standard deviation was non-zero, the decision rule we employed would have pointed to heterogeneity 100% (i.e. 23/23) of the time.

The meta-analysis also provided support for the relationship between both general and interaction adjustment and expatriate job performance. These findings may be interpreted as providing empirical support for inference 16 and thereby inferential support for inferences 7, 8, 14 and 15. That is to say that the adjustment construct that was assessed by the adjustment measure (inference 15), must have been theoretically related to the psychological construct domain (inference 14) that underlies the performance domain (inference 7) and therewith the criterion measure (inference 8). The theoretical grounds as to why the adjustment and performance constructs should be related have also been discussed elsewhere (see for example, Hechanova, Beehr, & Christiansen, 2003). Yet, it is important to note that the medium effect sizes (cf. Cohen, 1992) of the relationships between these adjustment facets on the one hand and expatriate job performance on the other hand are certainly not high enough to warrant expatriate selection on the basis of variables that are shown to predict specifically expatriate adjustment. This point was further elaborated upon in Chapter 3. Black (1990), for example, solely used adjustment as a criterion in his study focusing on Japanese expatriate managers, and concludes that "an important, but tentative, practical implication is that organizations, whether they are American or Japanese, may benefit from selecting individuals for foreign assignments who have high levels of cultural flexibility, social orientation, willingness to communicate, collaborative conflict resolution orientations, and who have a low degree of ethnocentricity" (p. 132). In contrast, on the basis of the findings reported in this dissertation, it is our explicit contention that adjustment should not be so employed as a proxy (or substitute) for the criterion measure.

On the basis of both the domestic and the expatriate research literature, Chapter 3 presented a number of propositions for the adequate and accurate

assessment of expatriate effectiveness. In doing so, this study was specifically concerned with describing methods of insuring that the expatriate performance criterion adequately samples the expatriate performance domain (i.e., inference 8 in Binning and Barrett's (1989) model). Specifically, it was proposed in this chapter that: 1) dependent variables that have been employed thus far within the field of expatriate effectiveness are best construed as variables that mediate the relationship between individual differences variables and criteria of expatriate effectiveness that actually sample expatriate job performance; more adequate sampling of the expatriate job performance domain is called for; 2) behaviorally specific criteria are essential for the assessment of expatriate job performance; 3) the dimensions of adaptive performance constitute an important subdomain of expatriate job performance and; 4) an over reliance on the generalization of domestic taxonomies will result in criterion deficiency, as expatriate specific criteria to complement the generalized criteria need to be developed. It was argued that an implementation of these propositions in empirical research aimed at criterion-related validation of selection context predictors of expatriate effectiveness would result in a more accurate reflection of the expatriate job performance domain.

The propositions that were presented in Chapter 3, together with the meta-analytic findings presented in Chapter 2, were therefore implemented within the confines of a single research study in Chapter 4. This study was firstly aimed at investigating the predictive validity (inference 5) of a large number of compelling predictors of expatriate job performance, most of which had been supported within the meta-analysis. A second aim of this study was to investigate the effects of these predictors on multiple dimensions of expatriate job performance. This study thus focuses on the central part of Binning and Barrett's model in that it set out to generate empirical support for inferences 5 and theoretical support for inferences 6-9. Within this chapter, it was hypothesized that the findings reported in the meta-analysis would be replicated empirically. Specifically, it firstly was hypothesized that the FFM dimensions, local language ability, intercultural sensitivity, previous international experience, and cultural flexibility would relate to expatriate job performance. Secondly, in addition to replicating the meta-analytic findings, a number of potentially useful predictors that had seldom or never been investigated in relation to expatriate job performance, namely intelligence, core self-evaluations, tolerance for ambiguity,

tolerance for uncertainty, need for cognition, category width, and implicit cultural adaptability theories were hypothesized to relate positively to expatriate job performance. The third goal was to examine the relative value of each predictor in light of the other predictors. The fourth and final goal of this investigation was to examine empirically how these predictors would relate to each of four factor analytically derived performance dimensions (inference 5), namely (1) task performance, (2) strategic planning and decision making, (3) adaptive performance, and (4) interpersonal communication skills and diplomacy. All 16 predictor variables were found to relate positively to expatriate overall job performance, with the exception of previous international experience, intelligence, tolerance for uncertainty, category width, and implicit cultural adaptability theories. Yet, a different picture emerged when all predictors had to compete against each other in explaining variance in the overall expatriate job performance criterion and the four performance subdimensions. Within these analyses it was found that the FFM dimensions are necessary and sufficient predictors of expatriate job performance. That is, it was found that the alternative predictors that were included in this investigation had little to add above and beyond the FFM in the prediction of expatriate overall job performance and in the prediction of each of the four subdimensions. Thus, when examined from the Binning and Barrett (1989) model, this study provided support for inference 5-9, but only for the FFM personality dimensions.

As opposed to the aforementioned relationships between broad personality dimensions and relatively broad performance dimensions, a different picture emerged in Chapter 5, where the focus was on the prediction of a much more specific construct, namely expatriation willingness. Within this chapter it was argued that when the expatriate selection ratio is high and (almost) all applicants need to be selected to fill the open vacancies, companies that employ expatriates might wish to screen their domestic applicants for their expatriation willingness. In this way they may increase their within-company expatriate candidate pool. Although this study cannot directly be mapped onto the Binning and Barrett model, it should be recognized that this model, and with it personnel selection, cannot be applied in situations where companies are not in a position to discriminate between their applicants' suitability. Therefore, companies that employ expatriates might need to take steps to make sure that the hiring decision remains in their hands, rather than

those of their employees and or applicants. In light of this issue, this study thus set out to examine to what extent the expatriation willingness of prospective applicants could be predicted using mostly the same individual differences variables that were employed to predict expatriate job performance within Chapter 4. In this manner companies might tackle three issues simultaneously, namely a) examining a candidates' suitability for the domestic position, b) examining a candidates' suitability for an expatriate position, and c) examining how likely it would be for a candidate to accept an expatriate assignment offer.

It was found within this study that increasing levels of predictor construct specificity led to improved prediction of expatriation willingness. Specifically, it was found that 1) FFM had incremental validity up and over core self evaluations, 2) expatriate specific predictors had incremental validity up and over core self-evaluations and the FFM, and 3) that biodata had incremental validity beyond core self evaluations, the FFM and expatriate specific predictors in the prediction of expatriation willingness. This study therewith provided support for the notion that specific predictors, that match the outcome variable in content, yield the highest predictive validities (cf. Ashton, 1998).

The last empirical study is presented in Chapter 6. This study applied the Social Relations Model (Kenny, 1994) to assessing the performance of police trainees at the South African Police Services. The focus of this study was to generate support for inference 8, although inferences 5-7 and 9 were also partially addressed (see also the introductory Chapter 1). Specifically, the study examined how the interdependent self-construals (Markus & Kitayama, 1991), shared by all of the African ethnicities present in South Africa, may interfere with adequate and accurate performance assessment. By collecting round robin ratings of trainee performance, in which all trainees rated every other trainee within their team including themselves, data collected could be analyzed by means of Kenny's (1994) Social Relations Model. In essence this study collected a criterion measure for and from each team member. Through a decomposition of the variance in all of these ratings into their perceiver, target and relationship variance components, it was found that only approximately 2.5% of the variability in performance ratings could be ascribed to the two target variance components that were distinguished, namely interpersonal skills and rule compliance. This indicates that there was very little consensus among raters, and

sheds considerable doubt on the extent to which mainstream sources of performance ratings, such as self-ratings and average other-ratings may be employed to adequately sample performance domains in interdependent cultures. It would go too far to suggest that the two stable target variance components were a complete representation of their "ultimate criterion" (Thorndike, 1949) counterparts. Yet, one could certainly postulate that these target variance components more closely approximated these ultimate criterion counterparts than the self- and other-ratings against which they were compared. Although the percentages of variance explained by both of the stable target variance components were small (namely 3.8% for interpersonal skills and 1.9% for rule compliance), they did differ significantly from zero, lending support to Binning and Barrett's inference 8. That is, the fact that different rating sources have shared variance in rating a target may be interpreted as convergent validity evidence for inference 8 (cf. Binning & Barrett, 1989).

Inference 5 was supported in this study by showing that two of the FFM personality dimensions were significantly related to the aforementioned two stable target variance components. Specifically, it was found that the effects of emotional stability and conscientiousness on the interpersonal skills and rule compliance stable target variance components were present, though equally small. Inference 6 was supported by the utilization of predictor measures that had been specifically designed for the South African population that was sampled in this study, and both inference 6 and 7 were supported within the introduction by the arguments as to why emotional stability and conscientiousness should relate to the trainees' performance. On the basis of the support generated for inferences 5-8 support was consequentially also generated for inference 9.

Future research should set out to investigate to what extent performance assessment of expatriates might suffer from these same issues due to interdependent self-construal. It may well be the case that the issues described in Chapter 6 are exacerbated when groups of employees who construe the self interdependently are sent on expatriate assignment, as is the case with management teams in Japanese Multinational Companies for instance. It may well be the case that in these instances the need for ingroup harmony might be even greater than it was in the home country.

7.2 Research questions

In a sense, research question 1 is much broader than research questions 2 and 3. As such this section will focus mostly on providing an answer to research question 1 after which research questions 2 and 3 will be addressed.

Research question 1 that was raised in the introduction inquired whether performance can be adequately and accurately assessed in the cross cultural industrial and organizational psychological context, and whether it can be related to individual differences variables that might be employed for purposes of personnel selection. An appreciation of the Binning and Barrett (1989) inference 10, which has not been addressed up until this point, is crucial to providing an answer to this question. In essence, inference 10 concerns the deduction of whether the actual demands of the job are adequately represented within the performance domain. According to Binning and Barrett (1989), this inference is critical in the sense that "to the extent that the validity of inference 10 is questionable, all other inferences in the system are questionable" (p. 488). The process in which support is generated for Inference 10 is job analysis. Even within the domestic context, Binning and Barrett note that the behavioral universes associated with the collection of demands that are part of the job have fuzzy if not indeterminate boundaries. The fact that only 53% of the 30 studies that were included in the meta-analysis utilized samples that were homogeneous in terms of jobs held by the expatriate respondents, that 23% of the studies failed to make any mention of job type, and that 23% of studies used samples that were heterogeneous in terms of job type (see Table 1, Chapter 2) may raise considerable doubt on the extent to which inference 10 has been supported in previous research. When one considers the multitude of jobs that expatriates may hold, one may wonder why grouping these people has been so academically appealing. The only thing that expatriates have in common (and the only thing that sets them apart from domestic employees) is the fact that they are employed for a temporary time period, in another country than their home country (cf. Aycan & Kanungo, 1997). Based on the above, the scientific merit of considering a combination of such a diverse group of individuals is at the very least somewhat questionable, and may be metaphorically likened to saying that all red things are the same. Any study on expatriates is likely to be deficient in the sense that the full array of jobs of people who refer to themselves as expatriates is unlikely to be

adequately represented in any performance domain. In this sense, concluding anything about expatriates in general is likely to be at least somewhat an oversimplification of matters. When one examines the Binning and Barrett (1989) model from this light, it is noteworthy that inference 10 presumes a relationship between the performance domain and a *single* job as opposed to the multitude of jobs that the expatriate may hold. Most specific job behaviors that might be attributed to the prototypical expatriate job are likely to exclude large numbers of expatriates. A bold conclusion would thus be that expatriates should be abandoned as a topic of academic inquiry. At the very least, the term expatriate should be redefined to reflect a quality that an individual may have rather than a category of people to which that individual belongs.

The job that a person holds is a far narrower definition of that individual than saying that he or she is an expatriate. Indeed, the expatriate banker is likely to have much more in common with domestic bankers than with an expatriate oil driller for instance. Placing constraints on the type of expatriate under investigation, for example, by considering only expatriate bankers, will only serve to constrain the number of individuals who are eligible for participation in any expatriate research endeavor. Given the fact that adequate samples of expatriates are already difficult to acquire in research efforts that do not heed these constraints, such an approach is unlikely to be fruitful. In addition, the implications of such research endeavors are likely to be constrained as well, rendering them unexciting. How theoretically interesting would it be to know the selection context predictors of male Dutch expatriate bankers working for Bank Z and stationed in Hong Kong? A far more fruitful approach may likely be found in considering all bankers, and including expatriate/non-expatriate status as a moderator variable in case expatriate numbers are adequately represented within the sample. It is thus our contention that selecting an expatriate banker on the basis of validated predictors of domestic banker performance is more legitimate than selecting an expatriate banker on the basis of validated predictors of a generic expatriate performance domain that cannot possibly cover all of the job demands that expatriates around the world are facing in their different jobs. In summary, in our opinion, inference 10 is suspect in expatriate research when people of different occupations and nationalities who reside in different host countries are combined within a single sample. Inference 10 is also suspect for the meta-analysis in Chapter 2 and the study focusing on the prediction of multidimensional

expatriate job performance in Chapter 4. The 60% variance in performance ratings accounted for by a general factor that generalizes across jobs and work contexts (Viswesvaran, Schmidt, & Ones, 2005) implies that expatriate studies employing occupationally mixed samples, have criteria with a minimal deficiency of 40%. This places the findings reported in Chapters 2 and 4 in a different light, in that although many of the predictors did explain variance in the expatriate job performance operationalizations, other predictors may need to be developed specifically to tap into the job specific performances that were not sampled. It can thus be concluded that research question 1 was at best partially supported for the expatriate studies included in this dissertation. Despite the previously voiced reservations regarding inference 8 (pertaining to the sampling of the performance domain by the criterion measure) and inference 10 (pertaining to the degree to which the performance domain is an adequate representation of the job), it seems that the answer to research question 1 as far as expatriates are concerned is a reserved "yes". The fact that most of the hypotheses regarding the relationships between selection context predictors and performance were supported, lends credence to an affirmative answer to this research question in the expatriate domain. Much remains to be done in future research endeavors, however, as will be discussed below.

Inference 10 was addressed in greater detail in the South African Police Services (SAPS) study that is reported in Chapter 6, since the performance measure that was employed to assess the training performance of the South African Police Services respondents was constructed on the basis of extensive discussions with 1) a Dutch police selection specialist, 2) a senior level researcher at SAPS psychological services, 3) the senior management of the SAPS Pretoria college, 4) training instructors at this college and 5) a number of trainees. This being the case, the performance domain that was sampled by the criterion measure in this study, was firmly rooted in the actual 'job' of the trainees. Yet, in this study it emerged that approximately 97% of the variance in ratings that were provided had nothing to do with the performance of the person that was being evaluated. Even though emotional stability and conscientiousness were significantly related to the stable target variance components of interpersonal skills and rule compliance, the fact that these components reflected only three percent of the variance in ratings does not lead to a jubilant affirmative answer regarding research question 1. That is, if emotional

stability and conscientiousness were implemented as selection context predictors solely on the basis of the findings of this study, any selection decision could easily be challenged because so little of the variance was attributable to the target. With regards to research question 1 it must thus be concluded that although an affirmative answer may be within reach, studies aimed at establishing validity of selection context predictors in the cross-cultural domain will need to go "the extra mile".

Research question 2 asked whether the FFM may be usefully applied in the prediction of various outcomes in the domain of cross-cultural industrial and organizational psychology. Within Chapter 2, a meta-analysis of the selection context predictors of expatriate job performance showed that all of the FFM personality dimensions with the exception of openness were related to expatriate job performance. So, it seems that despite the fact that these relationships were found to be moderated by unidentified variables, the FFM is a useful framework in the prediction of this outcome measure. In Chapter 4 the FFM was employed in predicting expatriate job performance in an empirical study in which the dimensions had to compete with other predictors in the prediction of an expatriate job performance criterion measure. Here, it was found that the FFM dimensions actually seemed to dominate other more specific predictors. As such it appears that here too, the FFM framework was useful in predicting an outcome relevant to the field. In Chapter 5, however, it was found that more specific predictors outperformed the FFM dimensions in the prediction of a specific outcome measure, namely expatriation willingness, even though bivariate relationships of extraversion, emotional stability and conscientiousness with expatriation willingness were all significant. The effect sizes in this study ranged from medium-small for emotional stability and conscientiousness and medium for extraversion. In summarizing the above it seems that the utility of the FFM in predicting outcomes within the domain of cross-cultural industrial and organizational psychology may be larger for outcomes that are as conceptually broad as the constituent FFM dimensions. The fact that further support for the FFM in predicting training performance of police trainees in South Africa was found in Chapter 6 and that therewith all of the studies presented in this dissertation found support for at least some of the hypotheses pertaining to the FFM dimensions, leads us to conclude that this framework has great potential in future studies within this domain.

Research question 3 inquired whether predictors that match the criterion in specificity and content demonstrate a higher predictive validity than predictors that do not. On the basis of the findings that were reported in the study that investigated the prediction of multidimensional expatriate job performance (Chapter 4) and the study that focused on the prediction of expatriation willingness (Chapter 5), it seems that the answer to this question is strongly affirmative. That is on the one hand the broad FFM dimensions were found to be necessary and sufficient predictors of expatriate job performance in Chapter 4, over and above variables that did not match the broad job performance criterion in specificity (such as cultural flexibility for example). On the other hand`, it emerged that specific predictors that match the criterion in terms of their action, target, context and time elements (Ajzen, 1988; Ajzen & Fishbein, 1977; Fishbein & Ajzen, 1975) did a better job in predicting expatriation willingness than predictors that did not.

7.3 Limitations and directions for future research

The meta-analysis that was presented in Chapter 2 summarized the findings of studies that focused on the prediction of expatriate job performance. It was pointed out that adjustment that has over the years proved to be a more popular 'criterion' in the expatriate management literature cannot serve as a criterion measure for validating selection context predictors for expatriates, because adjustment is not aimed at sampling the underlying expatriate job performance domain. This in our view is a major implication for future expatriate management research and we hope that the use of adjustment as a criterion measure for validating selection context predictors will be abandoned.

Within the introductory Chapter 1 and this concluding Chapter 7 the Binning and Barrett (1989) elaborated model for personnel decision research was employed to demonstrate the foci and the strengths and weaknesses of the various studies that are included within this dissertation. Within the introduction it was already pointed out that the aim of this dissertation was certainly not to validate each of the inferences distinguished by Binning and Barrett within the domain of cross-cultural industrial organizational psychology. Even within the domestic industrial / organizational psychological literature, few studies, if any, provide support for all of the Binning and

Barrett inferences. This leads to the conclusion that the Binning and Barrett framework is probably best thought of as an ideal or best practices approach that may not be feasible to implement within the confines of a single research study. That is, researchers are bounded by practical considerations such as the time and money that they can devote to their endeavors. Therefore, the merit of a particular validation study of selection context predictors may be judged by examining the extent to which one or more specific inferences out of the 15 inferences are supported. When viewed along these lines, the meta-analysis is probably the most comprehensive study conducted until now into expatriate selection. Until future research addresses the inferences that were not (fully) supported (and there are many, as was discussed earlier), the meta-analysis and the study that was presented in Chapter 4 might temporarily serve to guide practitioners and researchers alike in deciding upon which predictors ought to be included in their endeavors. Yet, future research that heeds the particular job and cultural contexts of the expatriate in question is certainly warranted before any of the predictors are used in "real life" selection.

With regards to applying the findings of the study on the prediction of expatriation willingness that was presented in Chapter 5, future research is also warranted because the external validity of the dependent variable (i.e., expatriation willingness) needs to be better investigated (we thank an anonymous reviewer of our manuscript for pointing this out). That is, a student who indicates that he or she is willing to embark on an expatriate assignment at time 1 might well have changed his or her mind by the time the opportunity presents itself at time 2, which may be several years later. Even though Tharenou (2003) demonstrated the stability of the willingness construct over time, future research should examine the prediction of expatriation willingness longitudinally with willingness being operationalized in terms of actual assignment acceptances / declinations.

The social relations model that was employed to sample the performance domain in Chapter 6 appears to have strong potential for applications in the field of personnel psychology. Although the percentage of variance assigned to the stable target variance component was extremely low in our investigation, this is likely to be caused by the interdependent self-construal that is common among the ethnicities that were investigated. More research comparing more traditional methods of assessing

job performance with the stable target variance component, which is identified within the Social Relations Model, is certainly called for.

In sum, we hope that the studies reported here will provide fertile grounds for future research endeavors. Although some of the methods and analyses employed within the confines of this dissertation, such as meta-analysis, seem to be gaining increasing acceptance within the mainstream literature, others, such as dominance analysis and the social relations model seem to harbor great untapped potential for applications within the applied industrial psychological and or cross-cultural domains.

Summary in English

This dissertation contains one theoretical study and four empirical studies that are focused on personnel selection in the cross-cultural context. In the first four studies the emphasis is on the examination of the relationship between predictors and criteria that may be applied to expatriate selection, whereas in the last study the focus is on the prediction of the performance of police trainees in South Africa.

Within the introductory chapter 1, Binning and Barrett's (1989) 'elaborated model for personnel decision research' is utilized to place the various studies contained in this dissertation in a general framework. On the basis of the inferences that comprise Binning and Barrett's construct and criterion related validation approaches, the different studies of this dissertation are introduced. Although it is not the aim of this dissertation to examine the complete model, it is investigated whether the cross-cultural industrial organizational psychological studies that are part of this dissertation can provide support for the inferences that Binning and Barrett (1989) describe. In this chapter, three general research questions are posed that transgress the individual chapters 2-6, namely:

1) Can performance be adequately and accurately assessed in the cross-cultural industrial and organizational psychological context (i.e. across jobs and cultural contexts), and can it be related to individual differences variables that might be employed for purposes of personnel selection?
2) Can the Five Factor Model (FFM; Costa & McCrae, 1989) dimensions be usefully employed as predictors of various outcomes (i.e., job and training performance and expatriation willingness) within the cross-cultural industrial organizational psychological context?
3) Will predictors that match the criterion in specificity and content demonstrate a higher predictive validity than predictors that do not?

Chapter 2 describes an empirical study and contains a meta-analysis of empirical studies aimed at the prediction of expatriate job performance. On the basis of 30 primary studies (total N = 4046) it was found that the predictive validities of the FFM-dimensions in the expatriate context were consistent with the predictive validities of these dimensions in the domestic (non-expatriate) context (Barrick & Mount, 1991; Hurtz & Donovan, 2000; Salgado, 1997; Tae & Byung, 2002). That is, similarly to research that was not specifically focused on expatriates, it was found that the factors extraversion, emotional stability, agreeableness and conscientiousness predict expatriate job performance and that openness does not. In addition it was found that cultural sensitivity and local language ability were significantly related to expatriate job performance. Cultural flexibility, selection board ratings, tolerance for ambiguity, ego strength, peer nominations, task leadership, people leadership, social adaptability, and interpersonal interest emerged as predictors from the exploratory investigations (K<4) that were carried out. It was surprising that intelligence had seldom been investigated as a predictor of expatriate job performance.

Chapter 3 describes a theoretical study and sets out to find answers to one of the most problematic issues in the prediction of expatriate job performance, namely the definition and operationalization of the performance domain. On the basis of a critical evaluation of expatriate research and deliberations pertaining to the generalization of domestic job performance taxonomies to the expatriate domain, four propositions were formulated that should facilitate future research in this field. Specifically it was proposed that: 1) Dependent variables that have been employed thus far within the field of expatriate effectiveness are best construed as mediators between their predictors and yet to be delineated criteria of expatriate effectiveness that actually sample expatriate job performance; more adequate sampling of the expatriate job performance domain is called for; 2) Behaviorally specific criteria, such as those developed by Tett et al., (2000) are essential to the adequate assessment of expatriate job performance; 3) The dimensions of adaptive performance which were developed by Pulakos and colleagues (2000; 2002) constitute an important subdomain of expatriate job performance; and 4) An over-reliance on the generalization of domestic taxonomies will result in criterion deficiency, as expatriate specific criteria to complement these generalized criteria need to be developed.

The aim of chapter 4 was to simultaneously investigate the most promising predictors that were identified in the meta-analysis of chapter 2 and to address the

propositions pertaining to criteria that were formulated in chapter 3. The following three issues were addressed. First, although the meta-analysis (chapter 2) found unequivocal support for a great number of predictors of expatriate job performance, these individual differences variables had never been simultaneously investigated. The meta-analysis could thus not investigate the possibility that there might be overlap in the variance of the different predictors. Therefore, it was thought important to more closely investigate the incremental validity of each predictor over the other predictors. So, chapter 4 set out to replicate the meta-analytic findings pertaining to the predictability of expatriate job performance on the basis of the Five Factor Model (FFM) dimensions, host country language ability, intercultural sensitivity, and cultural flexibility simultaneously and within the confines of a single empirical sample. Second, it was investigated whether certain predictors would relate to certain subdimensions of expatriate job performance. In chapter 3 the theoretical argument for such multidimensionality was already advanced. Knowledge of predictor-criterion relations at a specific level (that is, relationships of predictors with specific subdimensions of the expatriate job performance domain as opposed to an overall performance measure) may be particularly useful for the development of greater insight into the nature of the relationship between personality and job performance. Within chapter 4 the expatriate job performance domain was therefore operationalized as a multidimensional measure aimed at assessing the following dimensions: 1) task performance, 2) strategic planning and decision making, 3) adaptive performance, and 4) interpersonal communication skills and diplomacy. The third question in this investigation pertained to a number of promising predictors of expatriate job performance, which had previously seldom or never been applied in the expatriate context, and could thus neither be investigated in the meta-analysis (chapter 2). Therefore this investigation attempted to also shed light on the predictive validity of these predictors. These predictors were: intelligence, core self-evaluations, tolerance for ambiguity, tolerance for uncertainty, need for cognition, implicit cultural adaptability theories, and category width. Category width is a cognitive individual differences variable, which pertains to the amount of discrepancy that people will tolerate between exemplars that are part of the same category. Previous international experience was added to this list, because the meta-analytic results regarding this variable were ambiguous. The study was carried out on the basis of a sample of 122 expatriates of 42 different nationalities. The average age was 38.7 years and 65.3% of

the sample consisted of males. The findings of this investigation were as follows. Upon examining the bivariate relationships of these predictors with expatriate job performance, it was found that core self-evaluations, the FFM dimensions (extraversion, emotional stability, agreeableness, conscientiousness and openness), host country language ability, intercultural sensitivity, cultural flexibility, tolerance for ambiguity, and need for cognition were significantly related to expatriate job performance. Previous international experience, intelligence, tolerance for uncertainty, category width and implicit cultural adaptability theories on the other hand were not related to this criterion. On the basis of regression analysis, in which all aforementioned predictors competed to explain variance in expatriate job performance, it emerged that only conscientiousness and openness demonstrated significant relationships with expatriate job performance. Similar analyses on the subdimensions (task performance, strategic planning and decision making, adaptive performance, and interpersonal communication skills and diplomacy) revealed that task performance was only predicted by conscientiousness and openness, that strategic planning and decision making was only predicted by conscientiousness, that adaptive performance was only predicted by agreeableness and openness and that interpersonal skills and diplomacy was only predicted by extraversion, agreeableness and need for cognition. Based on these findings it was concluded that the FFM-dimensions may be necessary and sufficient in the parsimonious prediction of expatriate job performance.

With regards to the third question it was found that only core self-evaluations, tolerance for uncertainty, tolerance for ambiguity and need for cognition could explain variance in the overall expatriate job performance measure. Intelligence, category width and implicit cultural adaptability theories, on the other hand, did not show any significant relationships with this criterion. The findings for the relationships of these promising predictors with the subdimensions were highly analogous, with the significant relationship between tolerance for uncertainty and adaptive performance being the only exception. In addition, from the regression analyses on the overall performance measure and on the four subdimensions it emerged that need for cognition was the only variable to have similar predictive power as the FFM dimensions. Especially the finding for intelligence was surprising, since intelligence is one of the best predictors of domestic (non expatriate) job performance.

In chapters 2, 3, and 4 no attention is given to an especially thorny issue that might crush the true utility of the best predictors within the applied context. High expatriate selection ratios (i.e. the proportion of vacancies to the number of applicants) might after all have a suppressing effect on the adequate selection of expatriates. High expatriate selection ratios are the result of a scarcity of potential expatriates, so that organizations might be forced to hire every applicant. In chapter 5 it was therefore argued that the expatriate selection ratio may be lowered by assessing expatriate aspirations among domestic entry level applicants. Regression analyses were carried out on data obtained from a sample of 299 Dutch students who were about to enter the labor market. Results showed that 20 predictors, classified into the FFM dimensions, core self-evaluations, expatriate specific predictors, and biodata, could explain 50% of the variance in expatriation willingness. The aforementioned predictors were ordered in terms of their increasing alignment with the expatriation willingness construct. The degree of similarity of each predictor with expatriation willingness was evaluated on the basis of Ajzen en Fishbein's (1977) compatibility principle. This principle supposes that predictor-criterion relationships will be stronger when the degree of similarity between the predictor and the criterion is greater. A dominance analysis provided strong support for the hypothesis that a greater alignment between a predictor and expatriation willingness would result in a greater predictive power of the predictor in question in explaining variance in expatriation willingness. The biodata emerged as the strongest predictors, respectively followed by the expatriate-specific predictors, the FFM dimensions and core self-evaluations. The most important implication for lowering the expatriate selection ratio is that organizations may increase their expatriate candidate pools by hiring those domestic candidates, who in the past have gained relevant experience abroad. Further implications for theory and practice were discussed.

Chapter 6 was not aimed at expatriates, but rather at the adequate and accurate assessment of the training performance of police trainees in South Africa. This is a country with a culture in which the self-concept is defined in terms of a mutual interpersonal interdependence (Eaton & Louw, 2000; Markus & Kitayama, 1991). It is argued that this mutual interdependence leads assessors to possibly give less realistic performance evaluations (for example because they may not want to differentiate between the performance of different team members). It was therefore expected that the dominant validation paradigm, which is based in the European and

North American research traditions, might not be valid in this context. That is because this paradigm demands support for an empirical relationship between individual differences predictors and individual variability in performance measures that represent the performance domain. The aim of this investigation was to examine whether variability in performance evaluations in such a country can be attributed to the individual at all. To this end, Round Robin performance ratings on interpersonal skills and rule compliance were collected among 176 teams ($\overline{N}$ = 4.64 team members) of 816 trainees at the South African Police Services. These evaluations were subjected to an analysis by means of Kenny's Social Relations Model. The degree to which variance in rule compliance and interpersonal skills given by a perceiver about a trainee may be attributed to that trainee is called target variance, while the degree to which variance in rule compliance and interpersonal skills can be attributed to the perceiver is known as perceiver variance. Relationship variance, finally, pertains to the variance that may be attributed to the idiosyncratic relationship between the target and the perceiver after controlling for target and perceiver variance.

In line with a number of theoretical propositions that derive from the culture psychological literature, it was found that the sizes of the perceiver and relationship variance components were roughly equal to those typically found in cultures where people are thought to construe the self interdependently (cf. Markus & Kitayama, 1991), whereas the target variance component in the current sample was much smaller. Nonetheless the target variance component of both performance dimensions demonstrated significant relationships with the degree of conscientiousness and emotional stability of the targets. This chapter concluded with the implications of this investigation for carrying out validation research in cultures where people are thought to construe the self interdependently. An important limitation of this investigation was that the mode of self-construal of the South African participants was not directly assessed, nor was there a comparison sample from a culture in which people construe the self more independently.

Within the concluding chapter 7 an attempt is made to integrate the findings of the various investigations and to answer the three research questions that were posed in the introduction.

With regards to research question 1 (Can performance be adequately and accurately assessed in the cross-cultural industrial and organizational psychological context (i.e. across jobs and cultural contexts), and can it be related to individual differences variables that might be employed for purposes of personnel selection?) it was concluded that there exist a number of problems with the adequate and accurate assessment of job performance. Particularly the point that expatriates might be employed in very different jobs was discussed at length. Nonetheless, support was found for most hypotheses that pertained to the relationships between predictors and criteria. This is not only true for the expatriate studies that were discussed in chapters 2-4, but also for the investigation in the South African context which was discussed in chapter 6. The answer to question 1 is therefore confirmatory.

With regards to research question 2 (Can the Five Factor Model (FFM; Costa & McCrae, 1989) dimensions be usefully employed as predictors of various outcomes (i.e., job and training performance and expatriation willingness) within the cross-cultural industrial organizational psychological context?) the following was found. In this dissertation most of the hypotheses concerning the FFM dimensions and the relevant dependent variables were supported. Several of the studies were concerned with the dependent variables expatriate job performance, expatriation willingness, and the training performance of trainees at the South African Police Services. From these it was concluded that the FFM dimensions are a very useful framework for research in cross cultural industrial organizational psychology and that the answer to research question 2 is thus also confirmatory.

On the basis of the findings from the studies that were discussed in chapters 4 and 5 it was concluded with regards to research question 3 (Will predictors that match the criterion in specificity and content demonstrate a higher predictive validity than predictors that do not?) that predictors that match the criterion in terms of specificity and content demonstrate a higher predictive validity than predictors for which this is not the case. Finally, the limitations of each study were discussed and suggestions were made for future research.

Summary in Dutch

Dit proefschrift omvat één theoretisch betoog en vier empirische studies naar personeelsselectie in de crossculturele context. In de eerste vier studies ligt de nadruk op het onderzoeken van de relatie tussen voorspellers en criteria die kunnen worden toegepast bij de selectie van expatriates. In de laatste studie ligt de nadruk op het voorspellen van de trainingsprestaties van kandidaat politieagenten in Zuid-Afrika.

Om de verschillende onderzoeken in dit proefschrift in een algemeen kader te plaatsen wordt in het inleidende hoofdstuk 1 het 'uitgebreide model voor onderzoek naar personeelsbeslissingen' van Binning en Barrett (1989) besproken. Aan de hand van de gevolgtrekkingen (inferences), die ten grondslag liggen aan de construct- en criteriumgerelateerde validiteitsbenaderingen die Binning en Barrett in hun model omschrijven, worden de verschillende studies in dit proefschrift toegelicht. Hoewel het niet het doel is van dit proefschrift om het volledige model te onderzoeken, wordt nagegaan of de crossculturele arbeids- en organisatiepsychologische studies die deel uitmaken van dit proefschrift relevante, al dan niet ondersteunende, informatie kunnen bieden voor de gevolgtrekkingen die Binning en Barrett (1989) beschrijven.

In dit hoofdstuk worden tevens drie algemene onderzoeksvragen gesteld die de onderzoeken in hoofdstukken 2-6 overstijgen, namelijk:

1) Kunnen individuele verschillen-variabelen die gebruikt worden bij personeelsselectie gerelateerd worden aan functie- en cultuuroverstijgende werkprestaties?
2) Kunnen de persoonlijkheidsdimensies van het 'Five Factor Model' (FFM; Costa & McCrae, 1985) binnen de crossculturele arbeids- en organisatiepsychologie gebruikt worden bij het voorspellen van verschillende soorten uitkomsten, te weten werk- en trainingsprestaties en de uitzendingsbereidheid van expatriates?

3) Zullen voorspellers die qua specificiteit en inhoud overeenkomen met het criterium een hogere predictieve validiteit hebben dan voorspellers waarbij dit niet het geval is?

Hoofdstuk 2 is empirisch van aard en bevat een meta-analyse van empirische studies naar de voorspelling van werkprestaties van expatriates. Op basis van 30 primaire studies (totale N = 4046) werd gevonden dat de predictieve validiteiten van de FFM-dimensies in de expatriate context grote overeenkomsten vertonen met de predictieve validiteiten van deze dimensies in de reguliere (niet- expatriate) context (Barrick & Mount, 1991; Hurtz & Donovan, 2000; Salgado, 1997; Tae & Byung, 2002). Dat wil zeggen, net als in onderzoek dat zich niet specifiek heeft gericht op expatriates, werd gevonden dat de factoren extraversie, emotionele stabiliteit, vriendelijkheid en consciëntieusheid voorspellend zijn voor de werkprestaties van expatriates en dat de factor openheid geen relatie vertoont met werkprestaties van expatriates. Andere voorspellers die een relatie vertoonden met werkprestaties van expatriates waren culturele sensitiviteit en beheersing van de plaatselijke taal. Culturele flexibiliteit, beoordelingen door selectiepanels, ambiguïteitstolerantie, robuustheid van het ego, nominaties door gelijkgeschikten, taakgeoriënteerd leiderschap, sociaal aanpassingsvermogen en interpersoonlijke interesse vonden eveneens ondersteuning in de exploratieve analyses die uitgevoerd werden. Opvallend was dat intelligentie zelden was onderzocht als voorspeller van werkprestaties van expatriates.

Hoofdstuk 3 is theoretisch van aard en tracht antwoorden te vinden op één van de meest problematische vraagstukken bij het voorspellen van werkprestaties van expatriates, namelijk de definitie en operationalisatie van het werkprestatiedomein. Op basis van een kritische beschouwing van onderzoek naar expatriates en van denkbeelden over de vertaling van reguliere werkprestatietaxonomieën naar het expatriate domein, werden in dit hoofdstuk een aantal proposities geformuleerd die een bijdrage zouden moeten kunnen leveren aan dit onderzoeksveld. Er werd betoogd dat: 1) afhankelijke variabelen die tot nu toe in onderzoek naar de effectiviteit van expatriates zijn gebruikt – zoals aanpassing en/of adaptatie aan het gastland – het beste gezien kunnen worden als mediatoren in het verband tussen predictoren van, en criteria voor, de prestaties van expatriates. Deze criteria dienen dan wel daadwerkelijk betrekking te hebben op het werkprestatiedomein van expatriates; 2) gedragsmatig

specifieke criteria, zoals de criteria die werden ontwikkeld door Tett et al. (2000) essentieel zijn voor het adequaat meten van werkprestaties van expatriates; 3) de dimensies van adaptieve prestaties die werden ontwikkeld door Pulakos en collega's (Pulakos, Arad, Donovan, & Plamondon, 2000; Pulakos et al., 2002) een belangrijk subdomein vormen van de werkprestaties van expatriates; en 4) een blindelings vertrouwen op een generalisatie van reguliere (niet voor expatriates bedoelde) prestatietaxonomieën onherroepelijk zal leiden tot criteriumdeficiëntie, aangezien expatriate-specifieke werkgedragingen hierin buiten beschouwing worden gelaten.

Hoofdstuk 4 had tot doel het op geïntegreerde wijze onderzoeken van de meestbelovende voorspellers uit de meta-analyse van hoofdstuk 2 en de geformuleerde proposities over criteria uit hoofdstuk 3. In dit onderzoek werd getracht om antwoorden te vinden op de volgende drie vraagstukken. Ten eerste, hoewel de meta-analyse (hoofdstuk 2) ondubbelzinnige ondersteuning vond voor een groot aantal voorspellers van werkprestaties van expatriates, waren deze individuele verschillen-variabelen nog nooit simultaan onderzocht. De meta-analyse kon dan ook geen antwoord geven op de vraag of er overlap bestond in de voorspelling door de verschillende predictoren. Daardoor bleef de noodzaak bestaan de incrementele validiteit van elke predictor over de andere predictoren nader te onderzoeken. Daarom werd in hoofdstuk 4 ten eerste getracht de meta-analytische bevindingen te repliceren met betrekking tot de voorspelbaarheid van werkprestaties van expatriates door de Five Factor Model (FFM) dimensies, beheersing van de plaatselijke taal, interculturele sensitiviteit, en culturele flexibiliteit simultaan en binnen een enkele steekproef. Ten tweede werd onderzocht of bepaalde predictoren verschillende onderdelen van het werkprestatiedomein van expatriates konden voorspellen. In hoofdstuk 3 werd het theoretische argument voor het belang van een dergelijke multidimensionaliteit in het prestatiedomein reeds uitgewerkt. Kennis met betrekking tot predictor-criterium relaties op een specifiek niveau (dat wil zeggen relaties van predictoren met specifieke subdimensies van het werkprestatiedomein van expatriates in plaats van een algemeen oordeel over de werkprestaties van de expatriate) kunnen in het bijzonder bruikbaar worden geacht voor de ontwikkeling van een groter inzicht in de relatie tussen persoonlijkheid en werkprestaties. In hoofdstuk 4 werd het werkprestatiecriterium daartoe geoperationaliseerd als een multidimensionale maat om de volgende dimensies te meten: 1) taakprestaties, 2) contextuele prestaties, 3)

strategisch plannen en beslissen, 4) adaptieve prestaties, en 5) interpersoonlijke vaardigheden en diplomatie. De derde vraag in dit onderzoek had betrekking op een aantal veelbelovende voorspellers van werkprestaties, die voordien zelden of nooit waren toegepast in relatie tot werkprestaties van expatriates, en daarom ook in de meta-analyse (hoofdstuk 2) niet konden worden onderzocht. Om die reden werd in dit onderzoek ook getracht de predictieve validiteit van deze voorspellers vast te stellen. Het betrof de volgende predictoren: intelligentie, core self-evaluations, ambiguïteitstolerantie, onzekerheidstolerantie, de geneigdheid diep na te denken en daarvan te genieten, de mate waarin mensen denken dat aanpassing iets is dat te leren is, en tot slot categoriebreedte. Categoriebreedte is een cognitieve individuele verschillen-variabele, die betrekking heeft op de mate van discrepantie die door mensen getolereerd wordt tussen exemplaren die deel uitmaken van dezelfde categorie. Eerdere internationale werkervaring werd aan deze lijst toegevoegd omdat de meta-analyse over deze voorspeller geen duidelijke resultaten had opgeleverd. Het onderzoek werd uitgevoerd op basis van een steekproef van 122 expatriates met 42 verschillende nationaliteiten. De gemiddelde leeftijd was 38.7 jaar en 65.3% van deze steekproef bestond uit mannen. De bevindingen van dit onderzoek waren als volgt. Zonder inachtneming van andere voorspellers vertoonden core self-evaluations, de FFM-dimensies (extraversie, emotionele stabiliteit, vriendelijkheid, consciëntieusheid en openheid), beheersing van de plaatselijke taal, interculturele sensitiviteit, culturele flexibiliteit, ambiguïteitstolerantie, en de geneigdheid diep na te denken en daarvan te genieten, significante relaties met de maat voor algemene werkprestaties. Daarentegen waren eerdere internationale werkervaring, intelligentie, onzekerheidstolerantie, categoriebreedte en de mate waarin mensen denken dat aanpassing iets is dat te leren is, niet significant gerelateerd aan deze maat. Uit regressieanalyses, waarin alle bovengenoemde voorspellers met elkaar in competitie waren, bleek echter dat alleen consciëntieusheid en openheid significante relaties vertoonden met de maat voor algemene werkprestaties. Soortgelijke analyses op de subdimensies (taakprestaties, contextuele prestaties, strategisch plannen en beslissen, adaptieve prestaties, en interpersoonlijke vaardigheden en diplomatie) toonden dat taakprestaties alleen werden voorspeld door consciëntieusheid en openheid, dat strategisch plannen en beslissen alleen werd voorspeld door consciëntieusheid, dat adaptieve werkprestaties alleen werden voorspeld door vriendelijkheid, openheid, beheersing van de plaatselijke taal, en door de geneigdheid diep na te denken en daarvan te genieten, en

dat interpersoonlijke vaardigheden en diplomatie alleen werden voorspeld door extraversie, vriendelijkheid en de geneigdheid diep na te denken en daarvan te genieten. Op basis van deze bevindingen werd geconcludeerd dat de FFM-dimensies noodzakelijk en toereikend zijn voor het op een spaarzame wijze voorspellen van werkprestaties van expatriates.

Met betrekking tot de derde vraag werd gevonden dat alleen core self-evaluations, onzekerheidstolerantie, ambiguïteitstolerantie en de geneigdheid diep na te denken en daarvan te genieten variantie konden verklaren in de maat voor algemene werkprestaties. Intelligentie, categoriebreedte en de mate waarin mensen denken dat aanpassing iets is dat te leren is, daarentegen, vertoonden geen significante verbanden met dit criterium. De bevindingen voor de verbanden van deze veelbelovende voorspellers met de subdimensies waren soortgelijk, met als enige uitzondering het significante verband tussen onzekerheidstolerantie en adaptieve werkprestaties. Daarnaast bleek uit de regressieanalyses op zowel de algemene prestatiemaat als de subdimensies dat alleen de geneigdheid diep na te denken en daarvan te genieten een enigszins vergelijkbare voorspellende kracht had als de FFM-dimensies. Vooral de bevinding voor intelligentie was opvallend, aangezien intelligentie één van de beste voorspellers is van reguliere (niet-expatriate) werkprestaties.

In de hoofdstukken 2, 3 en 4 wordt voorbijgegaan aan een netelige kwestie die de daadwerkelijke utiliteit van de beste voorspellers in de toegepaste context teniet zou kunnen doen. Hoge expatriate selectieratio's (i.e. de proportie van vacatures tot het aantal sollicitanten) zouden immers een belemmerend effect kunnen hebben op de adequate selectie van expatriates. Hoge expatriate selectieratio's zijn het gevolg van krapte aan potentiële expatriates, zodat organisaties mogelijk genoodzaakt zijn om iedere sollicitant aan te nemen. In hoofdstuk 5 werd daarom betoogd dat de expatriate selectieratio omlaag kan worden gebracht door vroegtijdig bij sollicitanten die in een functie bij de organisatie geïnteresseerd zijn, tevens hun aspiraties voor een functie als expatriate in ogenschouw te nemen. Regressieanalyses werden uitgevoerd op data uit een steekproef van 299 Nederlandse studenten die op het punt stonden de arbeidsmarkt te betreden. De resultaten toonden dat 20 voorspellers, ingedeeld in de FFM-dimensies, core self-evaluations, expatriate specifieke voorspellers, en biodata, 50% van de variantie in uitzendingsbereidheid konden verklaren. Bovenstaande voorspellers werden geordend op basis van hun toenemende overeenstemming met

uitzendingsbereidheid. De overeenstemming van elke predictor met uitzendingsbereidheid werd beoordeeld aan de hand van het compatibiliteitsprincipe van Ajzen en Fishbein (1977). Dit principe veronderstelt dat predictor-criterium relaties hoger zullen uitvallen naarmate de predictor en het criterium meer met elkaar overeenstemmen. Een dominantieanalyse gaf sterke ondersteuning voor de hypothese dat een grotere overeenstemming tussen een voorspeller en uitzendingsbereidheid zou resulteren in een grotere voorspellende kracht van de predictor in kwestie in het verklaren van variantie in uitzendingsbereidheid. De biodata kwamen naar voren als de krachtigste groep voorspellers, gevolgd door respectievelijk de expatriate-specifieke voorspellers, de FFM-dimensies en de core self-evaluations. De belangrijkste implicatie voor het verlagen van de expatriate selectieratio is dat bedrijven hun interne expatriate kandidatenpools kunnen vergroten door die binnenlandse sollicitanten aan te nemen die in het verleden relevante ervaringen in het buitenland hebben opgedaan. Verdere implicaties voor de theorie en de praktijk werden besproken.

Hoofdstuk 6 richtte zich niet op expatriates, maar op het adequaat en nauwkeurig meten van de trainingsprestaties van politietrainees in Zuid-Afrika. Dit is een land met een cultuur waarin het zelfconcept wordt gedefinieerd in termen van een wederzijdse interpersoonlijke afhankelijkheid (Eaton & Louw, 2000; Markus & Kitayama, 1991). Er werd beargumenteerd dat deze onderlinge verbondenheid ertoe leidt dat beoordelaars werknemers mogelijk minder realistisch beoordelen (bijvoorbeeld doordat men geen onderscheid wil maken tussen de prestaties van verschillende teamleden). Daarom werd verwacht dat het dominante validatieparadigma, dat zijn oorsprong vindt in de Europese en Noord-Amerikaanse onderzoekstradities, mogelijk niet geldig zou zijn in deze context. Dit paradigma vereist namelijk een bewijs van een empirisch verband tussen individuele verschillen-voorspellers en individuele variabiliteit in criteriummaten die het prestatiedomein vertegenwoordigen. Het doel van het onderzoek was na te gaan of variabiliteit in prestatiebeoordelingen in een dergelijk land überhaupt kan worden toegeschreven aan het individu. Hiertoe werden zogenaamde Round Robin- beoordelingen op de prestatiedimensies interpersoonlijke vaardigheden en voorschriftvolgzaamheid onderzocht die verzameld waren onder 176 teams ($\overline{N}$ = 4.64 team leden) van 816 trainees bij de Zuid-Afrikaanse Politiedienst. De beoordelingen werden onderwerpen

aan een analyse aan de hand van het Social Relations Model van Kenny (1994). De mate waarin variantie in beoordelingen gegeven door een beoordelaar over een trainee op interpersoonlijke vaardigheden en voorschriftvolgzaamheid kan worden toegeschreven aan de trainee, wordt 'target'-variantie genoemd, terwijl de mate waarin variantie in beoordelingen kan worden toegeschreven aan de beoordelaar 'perceiver'-variantie wordt genoemd. 'Relationship' variantie, als laatste duidt op de variantie die toegeschreven kan worden aan de idiosyncratische relatie tussen de beoordeelde en de beoordelaar, nadat er is gecontroleerd voor de 'target-' en 'perceiver'-variantie.

In overeenstemming met een aantal theoretische proposities die voortkomen uit de cultuurpsychologische literatuur, werd gevonden dat de grootte van zowel de 'perceiver'- als de 'relationship'-variantie componenten ongeveer gelijk waren aan de grootte van deze componenten in culturen waarbinnen mensen het spelconcept opvatten als een autonome, onafhankelijke en zelfstandige entiteit (cf. Markus & Kitayama, 1991), terwijl de 'target'-variantiecomponent in de huidige steekproef juist veel kleiner bleek te zijn. Toch vertoonde de 'target'- variantiecomponent van beide prestatatiedimensies significante verbanden met de mate van consciëntieusheid en de mate van emotionele stabiliteit van de beoordeelden. Tot slot werden in dit hoofdstuk de implicaties voor het uitvoeren van validatie-onderzoek in culturen waar mensen het zelfconcept definiëren in termen van wederzijdse interpersoonlijke afhankelijkheid besproken. Een belangrijke beperking van dit onderzoek was dat de manier waarop Zuid-Afrikanen hun zelfconcept definieerden niet direct werd gemeten en er ook geen vergelijkingssteekproef beschikbaar was uit een land waarin mensen verondersteld konden worden hun zelfconcept op een meer onafhankelijke wijze te definiëren.

In het concluderende hoofdstuk 7 wordt getracht de bevindingen van de verschillende onderzoeken te integreren en antwoorden te geven op de drie onderzoeksvragen die in de inleiding werden gesteld.

Wat betreft onderzoeksvraag 1 (Kunnen individuele verschillen-variabelen, die gebruikt worden bij personeelsselectie, gerelateerd worden aan functie en cultuuroverstijgende werkprestaties?) werd geconcludeerd dat er een aantal problemen zijn met de adequate en accurate meting van werkprestaties. Vooral het punt dat expatriates werkzaam kunnen zijn in zeer verschillende functies werd hier uitvoerig besproken. Desalniettemin werd ondersteuning gevonden voor de meeste

hypothesen die betrekking hadden op de relaties tussen voorspellers en criteria. Dat geldt voor zowel de expatriate onderzoeken die werden besproken in hoofdstuk 2-4 als in het onderzoek in de Zuid-Afrikaanse context dat werd besproken in hoofdstuk 6. Het antwoord op vraag 1 is derhalve bevestigend.

Wat betreft onderzoeksvraag 2 (Kunnen de persoonlijkheidsdimensies van het 'Five Factor Model' (FFM; Costa & McCrae, 1985) binnen de crossculturele arbeids- en organisatiepsychologie gebruikt worden bij het voorspellen van verschillende soorten uitkomsten, te weten werk- en trainingsprestaties en de uitzendingsbereidheid van expatriates?), werd het volgende gevonden. In dit proefschrift werden de meeste hypothesen over de relaties tussen de FFM-dimensies en de relevante afhankelijke variabelen ondersteund. Het ging om de afhankelijke variabelen werkprestaties van expatriates, uitzendingsbereidheid en trainingsprestaties van trainees bij de Zuid-Afrikaanse politie. Hieruit werd geconcludeerd dat de FFM-dimensies een zeer bruikbaar raamwerk vormen voor onderzoek in de crossculturele arbeids- en organisatiepsychologie en dat het antwoord op onderzoeksvraag 2 dus tevens bevestigend is.

Op basis van de bevindingen uit de onderzoeken besproken in hoofdstuk 4 en 5 werd met betrekking tot onderzoeksvraag 3 (Zullen voorspellers die qua specificiteit en inhoud overeenkomen met het criterium een hogere predictieve validiteit hebben dan voorspellers waarbij dit niet het geval is?) geconcludeerd dat voorspellers die qua specificiteit en inhoud overeenkomen met het criterium een hogere predictieve validiteit vertonen dan voorspellers waarbij dit niet het geval is. Als laatste werden de beperkingen van elk onderzoek besproken en suggesties gedaan voor toekomstig onderzoek.

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Name Index

Curriculum Vitae

Stefan T. Mol was born on May 15, 1976, in Alphen aan den Rijn, The Netherlands. The son of a diplomat, he started his secondary education at the Washington International School, in Washington D.C. and went on to obtain his bilingual International Baccalaureate (IB) diploma at the Taipei American School, in Taiwan R.O.C.. He started studying Psychology at the University of Amsterdam in September 1994, where after shifting his emphasis from social to industrial/organizational psychology, he completed his master's degree in general psychology in October 2000. His published master's research consisted of validating the Multicultural Personality Questionnaire (MPQ) among both expatriate and international student populations in Taiwan. After another year in Taiwan, he returned to The Netherlands to work briefly as a researcher at the Research Department of GITP International BV, only to return to academia in June 2002, at which time he got started on his Ph.D. project at the Institute of Psychology (Department of Social Sciences) of the Erasmus University Rotterdam. The results of this project, which was co-financed by GITP International BV, are reported in the present thesis. At the time of this writing Stefan is employed as an assistant professor at the HRM-OB department of the Amsterdam Business School of the University of Amsterdam

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