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Towards a better understanding of the way antecedents influence the transfer of training content to work practice

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CHAPTER 4

Towards an Improved Understanding of Transfer Motivation: Investigating Transfer Motivation Profiles, their Antecedents and Transfer of Training

This chapter is based on De Jong, B., Jansen in de Wal, J., Cornelissen, L. J. F., & Peetsma T.T.D. (2022). Towards an improved understanding of transfer motivation: Investigating transfer motivation profiles, their antecedents and transfer of training. *Under review.*

Abstract

Despite investments of companies in employee training, transfer of training remains low. One component influencing transfer is transfer motivation. Recent insights have shown that different types of transfer motivation possibly independently influence transfer of training. It is therefore possible that transfer motivation profiles can be distinguished. Yet, it is unclear whether such motivational profiles exist. In this study, we investigated motivational profiles, how these profiles differ on personal and contextual antecedents influencing transfer motivation and how these profiles differ on transfer intention and transfer of training. This study does so by using the unified model of task-specific motivation (UMTM). Data were collected among 1317 participants who filled in a questionnaire representing the UMTM components directly after the training and indicated transfer after six weeks. Outcomes showed that four transfer motivation profiles could be distinguished, labelled: 'very optimistic', 'moderately optimistic', 'personal value' and 'conscious'. Moreover, profiles scoring higher on types of motivation scored higher on antecedents of transfer motivation, transfer intention, and transfer of training. These outcomes imply that trainings and work circumstances should be tailored differently towards different trainees to enhance their transfer motivation and transfer of training.

Keywords: transfer of training, transfer motivation, transfer intention, latent profile analysis, unified model of task-specific motivation

4.1. Introduction

Annually, companies invest heavily in employee training (Beer, et al., 2016; Grossman & Salas, 2011). However, the extent to which transfer of training (i.e., the degree to which training content is applied in the working context; Baldwin & Ford, 1988; Grossman & Salas, 2011) occurs is often low (Grossman & Salas, 2011; Velada et al., 2007). Previous research has repeatedly identified transfer motivation (i.e., the willingness of employees to apply acquired knowledge, skills and insights in practice; Noe & Schmitt, 1986) as a positive predictor of transfer of training (Gegenfurtner et al., 2009b; Grossman & Salas, 2011; Massenberg et al., 2015). If employees are more motivated to transfer, it is more likely that transfer of training occurs.

However, several meta-analyses (Gegenfurtner 2011; Gegenfurtner et al., 2012; Gegenfurtner & Vauras 2012) showed that the correlation between transfer motivation and transfer of training differed considerably across studies. As such, the importance of transfer motivation for transfer of training remains unclear. One explanation suggested by Gegenfurtner (2013) for this heterogeneity is that transfer motivation often is considered to be one-dimensional (e.g., Bhatti et al., 2013; Massenberg et al., 2015, 2017), whereas recent research has indicated that transfer motivation includes multiple types that uniquely predict (intention to) transfer training content to practice (e.g., Gegenfurtner, 2013; Gegenfurtner et al., 2009a, 2016; Gegenfurtner & Quesada-Pallarès, 2022; Tafvelin & Stenling, 2021). As such, it seems that not only the amount, but also the kind of transfer motivation matters and that transfer motivation should be grounded in motivational theories that differentiate between different kinds of motivation (Gegenfurtner, 2013; Gegenfurtner & Quesada-Pallarès, 2022).

In addition, different kinds of transfer motivation may not matter equally for each group of individuals (Gegenfurtner & Quesada-Pallarès, 2022). Previous motivation research in the work context suggests the existence of differences between groups of individuals in their motivational structure and how these kinds of motivation interact with each other (e.g., Howard et al., 2016; Valero & Hirschi, 2016). These studies provide evidence that motivational profiles can be derived among employees (See Spurk et al., 2020 for an overview) from the perspective of motivational theories such as self-determination theory (e.g., Howard et al., 2016;

Moran et al., 2012; Parker et al., 2021) and achievement goal theory (e.g., Fryer et al., 2016; Pastor et al., 2007; Wormington & Linnenbrink-Garcia, 2017). However, to date only one study (Quesada-Pallarès et al., 2022) has shown that it is also possible to derive specific profiles in which groups of individuals differ in their combination of different types of transfer motivation. More person-centered research into transfer motivation is therefore required.

Therefore, this study uses a person-centered approach to investigate whether different profiles of transfer motivation exist, whether profile membership can be predicted by personal and contextual antecedents that have been found to predict transfer motivation (Gegenfurtner et al., 2009b; Massenberg et al., 2015) and how these groups differ on transfer intention and transfer of training by means of a latent profile analysis (cf. Pastor et al., 2007). This study will do so through the lens of the unified model of task-specific motivation (UMTM; De Brabander & Martens, 2014). Outcomes of this study could provide insight into whether different groups of trainees need different support to raise transfer motivation and transfer of training. This can inform policy-makers and trainers about how specific trainings and work environments could be tailored to specific groups of trainees.

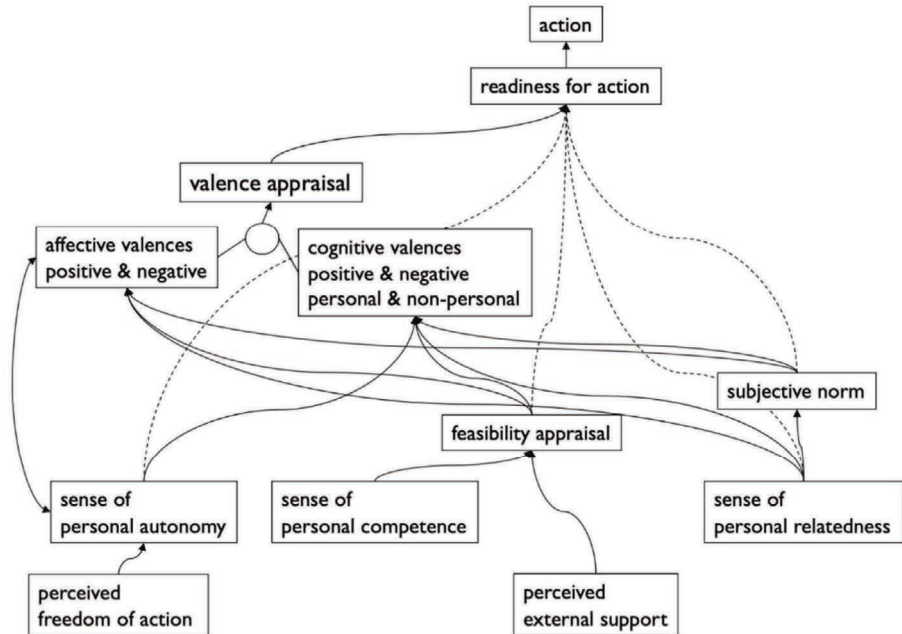
4.1.1. The Unified Model of Task-specific Motivation

The UMTM integrates six motivation theories, namely: self-determination theory (Ryan & Deci, 2020), flow theory (Csikszentmihalyi, 1990), expectancy-value theory (Wigfield & Eccles, 2000), social cognitive theory (Bandura, 1989), theory of planned behavior (Ajzen, 1991) and person-object theory of interest (Krapp, 2002). The UMTM is depicted in Figure 4.1. (see De Brabander & Martens, 2014 for an in-depth discussion of the UMTM). With this integration, the UMTM aims to overcome the challenge of navigating through multiple motivational theories that all have a (slightly) different - and in some cases conflicting - focus on motivation (De Brabander & Martens, 2014). Moreover, unlike for example self-determination theory, the UMTM also integrates both personal and contextual components and how they are related to each other. These components can be linked to factors that have been found to influence transfer of training (Gegenfurtner et al., 2009b; Massenberg et al., 2015). Moreover, these components align with components in existing transfer of training

models (e.g., Grossman & Salas, 2011; Holton, 1996; Massenberget al., 2017), which do not include assumptions about the interrelationships between personal and contextual components either.

Figure 4.1.

The Unified Model of Task-Specific Motivation (De Brabander & Martens, 2014, Adapted by De Brabander & Glastra, 2018, 2021)



The UMTM posits that task-specific behavior (i.e., exerting a relatively specific action option) is predicted by task-specific motivation (De Brabander & Martens, 2014). This motivation is expected to be multifaceted and represented in the model by affective and cognitive valences. These valences are derived from the different affectively and cognitively oriented motivational theories. The affective valences originate for example from flow theory (Csikszentmihalyi, 1990) and self-determination theory (Ryan & Deci, 2020), whereas the cognitive valences stem from for example from expectancy-value theory (Wigfield & Eccles, 2000). Affective and cognitive valences are theorized in the UMTM to function relatively independently

from each other and, in interaction, form an overall valence appraisal (De Brabander & Martens, 2014).

Affective valences refer to feelings that individuals anticipate when they would perform a task (e.g., feeling enthusiastic about applying training content; De Brabander & Martens, 2014). *Cognitive valences* concern the valuation of the possible consequences of performing a task (e.g., higher work efficiency when training content is being used). Performing a task has consequences for individuals themselves and for others (i.e., colleagues, supervisors). Thus, cognitive valences can be both personal and nonpersonal (De Brabander & Martens, 2014). Considering to perform a task causes individuals to experience positive and negative feelings and to foresee positive and negative consequences for themselves and others. As such, the valences can be positive or negative. If the valences are positive, individuals experience positive feelings when they consider performing the task and anticipate positive consequences for themselves and/or others. The opposite is the case when the valences are negative, leading to approach and avoidance motivation (De Brabander & Martens, 2014; Elliott, 2006). However, affective and cognitive valences can also be positive and negative simultaneously (De Brabander & Martens, 2014). For example, one can see many positive consequences from exhibiting task-specific behavior, but still find it unpleasant.

When affective and cognitive valences are positive, it is expected that readiness for action increases, whereas the opposite is the case when the valences are negative (De Brabander & Martens, 2014). *Readiness for action* is conceptualized as the willingness of individuals to perform task-specific behavior (De Brabander & Glastra, 2018), of which transfer intention is an example. *Action* is defined as applying task-specific behavior and is predicted by readiness for action (De Brabander & Glastra, 2018). Transfer of training is an example of action. The assumed relationships between these components corroborates with the transfer of training literature, which indicates that higher quality transfer motivation positively predicts transfer intention and/or transfer of training (Gegenfurtner, 2009; Gegenfurtner et al., 2013, 2016; Gegenfurtner & Quesada-Pallarès, 2022).

4.1.2. Task-specific Antecedents

The UMTM also integrates three categories of antecedents predicting affective and cognitive valence which also originate from the aforementioned motivational theories (De Brabander & Martens, 2014). The UMTM distinguishes between personal and contextual antecedents. The first personal antecedent is *sense of personal autonomy*, which is defined as the extent to which individuals perceive themselves as cause for choosing and performing task-specific behavior. The second personal antecedent is *sense of personal relatedness*, which is conceptualized as the extent to which one experiences a sense of belonging and connection with other people that participate in the context of the task-specific behavior. The third personal antecedent is *sense of personal competence*, which refers to judgements of individuals regarding the extent to which they perceive themselves capable to perform a task successfully (Brabander & Martens, 2014).

The first contextual antecedent is *perceived freedom of action*, which is conceptualized as the extent to which individuals experience freedom to make decisions about selecting and performing task-specific behavior. The second is *subjective norm*, which refers to the inclination to abide with the agree- or disagreement of significant others about performing the task-specific behavior. The third is *perceived external support*, which is described as the extent to which individuals experience their environment to support or hamper them in performing task-specific behavior (e.g., sufficient working space, expertise among colleagues; De Brabander et al., 2009; De Brabander & Martens, 2014; Grossman & Salas, 2011). Perceived external support and sense of personal competence together form an overall *feasibility appraisal*, which is defined as the expectations individuals have about the feasibility of performing a task successfully (De Brabander & Martens, 2014).

It is expected that feasibility appraisal, subjective norm and sense of personal relatedness (indirectly) positively predict positive valences and negatively predict negative valences. Moreover, sense of personal autonomy is expected to have a reciprocal association with affective valence, but to predict cognitive valence. Finally, perceived freedom of action is expected to predict sense of personal autonomy, whereas sense of personal relatedness is expected to predict subjective norm (De

Brabander & Martens, 2014). In the transfer of training literature, these antecedents are identified as key predictors of transfer motivation and/or transfer of training (e.g., Blume et al., 2010; Colquitt, 2000; Gegenfurtner et al., 2009b; Gegenfurtner & Testers, 2022; Massenbergh et al., 2017; Salamon et al., 2022ab).

4.1.3. A Person-centered Approach to Investigating Valence Appraisal

Five studies have provided evidence for the dynamics of the UMTM components and for the predictive value of the UMTM for readiness for action. That is, positive and negative valences predict readiness for action positively and negatively, respectively. (De Brabander & Glastra, 2018, 2021; De Brabander & Martens, 2018; De Jong et al., 2020). In addition, these studies also showed that multiple valences together predicted readiness for action. Especially positive affective valence and positive personal and nonpersonal cognitive valence positively predicted readiness for action, whereas negative affective and cognitive valence negatively predicted readiness for action (De Jong et al., 2023; De Brabander & Glastra, 2018, 2021; De Brabander & Martens, 2018). Finally, there is evidence that the valences can predict both self and external-reported transfer via readiness for action (De Jong et al., 2020, 2023).

Yet, previous studies did not yet investigate the relationships between these components for different subgroups. This could be interesting, as this can test the notion of De Brabander and Martens (2014) that positive and negative affective and cognitive valences possibly independently predict readiness for action. It is relevant to acquire more insight in this, as this can unveil how possible interactions between affective and cognitive valences might hamper or enhance readiness for action (De Brabander & Martens, 2014) and whether these interactions in transfer motivation function differently for different trainees (Gegenfurtner & Quesada- Pallarès, 2022). Eventually this extends our knowledge on the virtues of the UMTM and can provide us with more insight in explaining the complex phenomenon of (transfer) motivation (De Brabander & Martens, 2014). Moreover, insights in such motivation groups could provide a better explanation for why interventions to raise transfer often have limited effects (see Blume et al., 2010 for an overview).

There is empirical evidence that could indicate the existence of different valence subgroups as the factor structure of the personal and nonpersonal cognitive valences differed per study. For example, participants in the study of De Brabander and Martens (2018) and De Jong et al. (2023) did not seem, on average, to distinguish between personal and nonpersonal positive cognitive valence, whereas participants in other studies did (De Brabander & Glastra, 2018, 2021). This indicates that particular valences are more salient in predicting transfer intention in some samples than in others and provides evidence for the possibility of deriving valence profiles in which groups of individuals differ in their manifestation of each valence type. Moreover, Quesada-Pallarès et al. (2022) already provided evidence for the existence of transfer motivation profiles. In their study, they conceptualized transfer motivation as intentions that are formed by different components, such as perceived transfer control, subjective norms towards transfer and attitudes towards transfer (e.g., positive and negative feelings), for which the latter can be translated to the affective valences of the UMTM. Based on a cluster analysis, they distinguished three subgroups that scored differently on transfer intention and transfer of training. Subgroups scoring higher on affective types of transfer motivation also scored higher on transfer intention and transfer of training. Moreover, a high positive feeling to transfer coexisted with a low negative feeling to transfer and vice versa in these subgroups (Quesada-Pallarès et al., 2022), providing evidence against independence of positive and negative affective transfer motivation. To date, Quesada-Pallarès and colleagues (2022) are the first to examine transfer motivation profiles and did not include cognitive types of motivation that are comparable to the cognitive valences of the UMTM. As such, more research is warranted.

Moreover, it is also unclear whether members of the valence profiles vary in the personal and contextual UMTM antecedents that influence affective and cognitive valences. Studying this could provide insight into which antecedents should be paid (more) attention to for specific groups of individuals. In addition, it is unclear whether members of different valence profiles also score differently on transfer intention and transfer of training. This could aid our understanding about which valence

distributions are more desirable for stimulating transfer intention and transfer of training.

4.1.4. This study

In line with the aforementioned arguments, this study investigates the following research questions:

1. What profiles with different configurations of affective and cognitive valences for transfer of training can be distinguished among trainees?
2. To what extent do valence profiles differ in the support of personal and contextual antecedents of the UMTM?
3. To what extent do valence profiles differ in transfer intention and transfer of training?

Based on the aforementioned transfer of training and UMTM literature, we formulated the following hypotheses:

1. We expect that multiple affective and cognitive valence profiles can be distinguished.
2. We expect that, within profiles, high manifestations of positive affective valence co-occur with low manifestations of negative affective valence, and vice versa.
3. We expect that, within profiles, manifestations of positive and negative personal and nonpersonal cognitive valences co-occur independently of each other.
4. We expect that individuals that score higher on the UMTM personal and contextual antecedents belong to profiles scoring higher on positive valences.
5. We expect that individuals belonging to profiles that score higher on positive valences also score higher on transfer intention and transfer of training.

4.2. Method

4.2.1. Sample and Procedure

This study was conducted at the Dutch judicial training institute and the Dutch police academy, which provide trainings to judicial employees and employees working for the police. Data were collected among trainees who participated in one of 264 included trainings. Of the included trainings, 129 (48.9%) were provided by the

judicial training institute and 135 (51.1%) by the police academy. Trainings were selected if they (1) covered a specific skill or content (e.g., acquiring skills in working with a new type of software), since the UMTM focuses on task-specific behavior and (2) using its content in practice was not mandatory. Application would otherwise not be the result of motivation but due to the obligation of applying the training content.

All trainings focused on providing skills rather than knowledge. Both soft- and hard-skill trainings were represented in the selected trainings. A hard-skill training is more focused on teaching specific technical skills such as computer programming or how to fill in a judicial report, whereas a soft-skill training is more focused on inter- and intrapersonal skills such as teamwork and communication (Laker & Powell, 2011). A total of 104 (39.4%) trainings were categorized as hard-skill trainings, whereas 160 (60.6%) trainings were categorized as soft-skill trainings. The amount of training days ranged between 36 full days and half a day. Moreover, 128 (48.5%) trainings were provided in-person, whereas the other 136 (51.5%) were provided online.

Participants filled in a questionnaire directly after the training. Transfer of training was measured after six weeks. In the transfer of training literature, the time period between training and transfer of training measurement varies, ranging between three weeks to one year (e.g., Brown, 2005; Burke & Baldwin, 1999; De Jong et al., 2020; Saks & Belcourt, 2006; Stevens & Gist, 1997; Velada et al., 2007). In this study it was co-decided with a selection of teachers from the trainings that six weeks would be sufficient for participants to have opportunities to use training content in practice.

All participants of the included trainings were asked to participate in the study at the end of the training. Partaking was voluntary and without incentives and we collected data between December 2019 and June 2021. The characteristics of the sample can be found in table 4.1.

To compare the sample characteristics with the representativeness for the whole population, we compared the average age and proportion of women of all employees working within the judiciary or the police (Raad van de Rechtspraak, 2021; Nationale Politie, 2021) with a one sample t-test. The average age of the sample within both the judiciary ($t(594) = -9.86, p < .001$) and police ($t(526) = -14.29, p < .001$) was

significantly lower than of the population. Moreover, our sample contained significantly more women ($t(590) = 14.16, p < .001$) than the number of women working in the judiciary, whereas our sample contained significantly less women than the number of women working for the police ($t(518) = -2.105, p = .036$).

Table 4.1.*Characteristics of the Sample*

Demographic characteristic	Judicial training institute	Police academy	Total sample
Number of participants T1 (response rate)	595 (45.5%)	527 (55.1%)	1122 (49.5%)
Indicated transfer at T2 (response rate)	458 (35.0%)	270 (28.2%)	728 (32.1%)
Filled in questionnaire at T1 and indicated transfer at T2 (response rate)	345 (26.4%)	188 (19.6%)	533 (23.5%)
Total number of unique participants (response rate)	706 (54.0%)	611 (63.8%)	1317 (58.1%)
Number of trainings	129	121	250
Range in number of participants per training	1-12	1-18	1-18
Mean age in years (SD)	40.71 (11.50)	38.75 (10.36)	39.89 (11.03)
Percentage women	81.4%	30.4%	57.52%
Mean experience in years (SD)	7.00 (8.41)	5.05 (5.49)	6.12 (7.29)
Type of work (whole sample percentage)	Executing (59.5%) Supporting (37.0%) Governing (3.5%)	Executing (88.5%) Supporting (9.2%) Governing (2.3%)	Executing (73.8%) Supporting (23.3%) Governing (2.9%)
Profession (whole sample percentage)	Legal assistant (42.3%) Administrative assistant (28.8%) Judge (6.2%) Administrative judicial assistant (5.2%) Manager (3.0%) Other (14.5%)	Police officer (32.8%) Investigator (26.1%) Manager (11.2%) Apprentice (9.5%) Security (2.1%) Intelligence (1.3%) Other (17%)	Legal assistant (22.4%) Police officer (15.4%) Administrative assistant (15.2%) Investigator (12.3%) Manager (7.3%) Apprentice (4.5%) Judge (3.3%) Other (22.9%)

Table 4.2.*Items and Answering Scales for the Questionnaire*

Construct	Item	Answering scale
1. Sense of personal autonomy	When applying this course's content in my job, I would feel I did so [...]	Completely out of my own volition – Completely out of experienced pressure
2. Perceived freedom of choice	When putting the things that were offered in this course into practice, I will have [...] opportunities for free choice	Very much – Very little
3. Sense of personal competence	I personally feel [...] to successfully apply the knowledge, skills, and insights that I acquired in this course	Very able – Not able at all
4. Perceived external support	I find the facilities in our court to apply what I have learned successfully [...]	Very obstructive – Very conducive
5. Subjective norm	I think that colleagues who are important to me would assess me applying what I have learned during the course as [...]	Not positive at all – Very positive
6. Sense of personal relatedness	I feel [...] with colleagues that are involved when I apply the learned content in practice	Closely connected – Barely connected
7. Positive affective valence	When applying the knowledge, skills, and insights that I acquired in this course, I would [...] have a positive feeling	Very often – Rarely or never
8. Negative affective valence	When applying the knowledge, skills, and insights that I acquired in this course, I would [...] have a negative feeling	Rarely or never – Very often
9. Positive cognitive valence personal	Considering the positive consequences, applying the course content in my job would be [...]	Not or hardly rewarding – Very rewarding
10. Positive cognitive valence nonpersonal	Considering the positive consequences, applying the course content in my job would be [...] for my team	Not or hardly rewarding – Very rewarding
11. Negative cognitive valence personal	The costs and unwanted consequences of applying the course content in my job would be [...]	Very heavy – Negligible
12. Negative cognitive valence nonpersonal	The costs and unwanted consequences of applying the course content in my job would be [...] for my team	Very heavy – Negligible
13. Transfer intention	I am going to apply the things that I have learned during the course in my job.	Completely disagree – Completely agree
14. Transfer of training	To what extent did you put the learned content into practice?	Not at all – Very much

Note. Items 1, 2, 3, 6, 7, 11 and 12 were recoded, so that a high value would indicate much of the measured construct.

Investigating reliability of item responses requires an alternative assessment when one item per construct is used. In that case, reliability can be investigated with SEM model-fit coefficients as they were originally introduced as coefficients to evaluate the reliability of latent structural equated scores (Tucker & Lewis, 1973). Moreover, they were used “to avoid models with superfluous parameters that assume

meaningless values" (Browne & Cudeck, 1993, p. 136). As unreliable item response patterns are not able to predict or correlate with responses on other items, model-fit coefficients inform about the unreliability in item responses. In previous UMTM research, we made a path model in which the components of the UMTM were related to each other in accordance with the dynamics of the UMTM. In this model, we constrained the relationships between the components in the direction that was hypothesized by De Brabander & Martens (2014). These analyses showed a good fit for these models, providing evidence for the reliability of the questionnaire representing the UMTM (De Jong et al., 2023).

Moreover, we also measured some components with multiple items. For nonpersonal cognitive valence participants indicated for different stakeholders whether applying training content by the participant would be valuable (or not). These stakeholders differed per work context. For the judiciary context these were the team, court, judiciary, and litigant. For the police context these were the team, sector, police task, and civilian. Stakeholders were matched on their level of generality, leading to the following matches: court/sector, judiciary/police task and litigant/civilian. In addition, feasibility appraisal was measured based on sense of personal competence and perceived external support.

For these components, we performed a Confirmatory Factor Analysis (CFA). The items that refer to different stakeholders to measure nonpersonal cognitive valence loaded on two factors, one for positive and one for negative nonpersonal cognitive valence. Sense of personal competence and perceived external support loaded on the feasibility appraisal factor. Different goodness-of fit indices were used to investigate model-fit. For RMSEA and SRMR, a value below .08 indicated a sufficient fit and a value below .05 was classified as good. For TLI and CFI, a value above .90 indicated a sufficient fit and above .95 was interpreted as good (Geiser, 2012). Multicollinearity, linearity and univariate and multivariate normality of the scores were checked (Flora et al., 2012). All assumptions were met. Model-fit was sufficient when a correlation was added between the error terms of the items regarding the judiciary/police task and the litigants/civilian of the field for both positive and negative cognitive valence ($\chi^2(30) = 53.147, p = .01$; RMSEA = .03 [.01; .04];

CFI = 1.00, TLI = 1.00, SRMR = .02). We also estimated Omega (ω) which can be used to investigate reliability of latent variables (McDonald, 1999). These were $\omega = .66$ for feasibility appraisal and $\omega = .80$ for both positive and negative nonpersonal cognitive valence. The final CFA model was used as reference for making sum scores of nonpersonal positive and negative cognitive valence and feasibility appraisal that were used in further analyses.

4.2.3. Data-analysis

To analyze the data, Mplus 8.0 was used (Muthén & Muthén, 2017). A latent profile analysis (LPA) was performed. Prior to that, multivariate outliers were checked (see Pastor et al., 2007). Analyses showed two outliers, leading to the exclusion of two participants.

LPA classifies individuals from a heterogeneous group into homogeneous subgroups (i.e., profiles). Individuals within these subgroups show comparable patterns in their responses to indicators (Pastor et al., 2007). Indicators in this case were two items measuring personal positive and negative cognitive valences, two scale variables of items measuring positive and negative nonpersonal cognitive valences, and two items measuring positive and negative affective valence (Pastor et al., 2007).

For these indicators, LPA can freely estimate means, variances, and covariances within profiles. (Co)variances can also be constrained to be equal across profiles to reduce model complexity (see Pastor et al., 2007 for a discussion on LPA parameterizations). In this study, means were freely estimated across profiles and (co)variances were constrained to be equal across profiles, because convergence issues emerged when more parameters were freely estimated for three or more profiles.

To explore the number of profiles that could best and most informatively represent the data, a number of different models were estimated. These models concerned profile solutions with varying numbers of profiles, which were compared in terms of profile uniqueness, model-fit, classification accuracy, and profile sizes (Marsh et al., 2009; Pastor et al., 2007).

Model-fit was investigated with the Akaike Information Criterion (AIC), Bayesian Information Criterion (BIC), the sample size adjusted BIC (SSA-BIC), the Lo-

Mendell-Rubin log-likelihood Test (LMRT) and the Bootstrapped Likelihood Ratio Test (BLRT; Nylund et al., 2007; Pastor et al., 2007). For the AIC, BIC and SSA-BIC, smaller values indicate better model-fit. The LMRT and the BLRT are significance tests of the null-hypothesis that there is no increase in model-fit between a model with $K-1$ and K profiles. A significant LMRT or BLRT therefore indicates that adding a profile improves model-fit (Nylund et al., 2007; Pastor et al., 2007). Classification accuracy of the different models was evaluated through the entropy statistic. A high entropy indicates that participants are more accurately classified into the correct profile (Pastor et al., 2007). Finally, solutions with profiles smaller than 5% of the sample were not considered as they may be spurious and not contain substantive insights that are relevant for practice (Ferguson et al., 2020). The final model was used to investigate different profiles that were prevalent within the sample (RQ1).

To answer RQ2 and RQ3 the antecedents and outcome variables were added to the final LPA model as auxiliary variables (Marsh et al., 2009). We also added demographic characteristics to investigate potential differences between the profiles on the demographic variables as previous research has indicated that some of these characteristics can predict transfer motivation and/or transfer of training (Gegenfurtner, 2020; Gegenfurtner et al., 2020; Gegenfurtner & Quesada-Pallarès, 2022; Gegenfurtner & Vauras, 2012) and might explain why specific individuals belong to specific profiles. All demographic variables, except for work domain, gender and training institute were analyzed using the BCH method (Asparouhov & Muthen, 2014). Work domain, gender and training institute are categorical auxiliary variables and were analyzed using the DCAT method (Asparouhov & Muthen, 2014). To answer RQ2, means of the UMTM antecedents were compared across profiles from the final LPA model. To answer RQ3 profile mean differences in transfer intention and transfer of training were investigated.

4.3. Results

4.3.1. Descriptive statistics

Table 4.3. provides an overview of the correlations, means and standard deviations of the different UMTM components and demographic characteristics. The correlations between the components are in line with the proposed dynamics of the

UMTM. Exceptions are the correlation of personal and nonpersonal negative cognitive valence with sense of personal relatedness, which are not significant. In addition, both personal and nonpersonal negative cognitive valence do not correlate with transfer of training.

Table 4.3.
Correlation Matrix, Means and Standard Deviations of the UMTM Components and Demographic Characteristics.

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.
1. Perceived freedom of action															
2. Sense of personal autonomy	.35***														
3. Feasibility appraisal	.30***	.32***													
4. Sense of personal relatedness	.16**	.19***	.29***												
5. Subjective norm	.22**	.30***	.43***	.26***											
6. Positive affective valence	.33***	.39***	.39***	.29***	.37***										
7. Negative affective valence	-.23***	-.26***	-.30***	-.15***	-.21***	-.34***									
8. Positive cognitive valence (p)	.17***	.24***	.38***	.17***	.33***	.43***	-.19***								
9. Positive cognitive valence (np)	.08**	.10**	.40***	.25***	.30***	.37***	-.20***	.63***							
10. Negative cognitive valence (p)	-.20***	-.20***	-.20***	-.01	-.17***	-.15***	.20***	-.10***	-.04						
11. Negative cognitive valence (np)	-.15***	-.18***	-.19***	-.001	-.14***	-.16***	.19***	-.13***	-.08*	.86***					
12. Transfer intention	.10***	.14***	.33***	.14***	.28***	.30***	-.17***	.35***	.35***	-.08*	-.08*				
13. Transfer of training†	.12**	.19***	.25***	.15***	.25***	.26***	-.19***	.31***	.23***	-.07	-.002	.15***			
14. Experience	.04	.04	-.01	.02	-.04	.02	.02	-.12***	-.13***	-.08*	-.07	-.02	-.06		
15. Age	.11	-.07*	-.07*	.01	-.07*	.03	.06	-.12***	-.21***	-.14***	-.14***	-.10***	-.11*	.54***	
Mean	5.41	5.86	5.27	5.23	5.45	5.59	2.44	5.84	5.50	2.50	2.59	5.61	4.55	6.12	39.89
Standard deviation	1.20	1.21	0.90	1.24	1.16	0.96	1.25	1.14	1.24	1.58	1.50	1.65	1.48	7.29	11.03

Note: p = Personal, np = Nonpersonal.

* $p < .05$, ** $p < .01$, *** $p < .001$.

† measured after six weeks

4.3.2. Valence Profiles

Table 4.4. displays model-fit statistics of the different LPAs. The LMRT was consistently significant when profiles were added. Moreover, the AIC, BIC and SSA-BIC improved when more profiles were added, whereas the entropy value only decreased slightly with a four-profile solution. On the other hand, the BLRT did not improve significantly with a four-profile solution or beyond. In addition, a five-profile solution or more contained profiles with less than 5% of the sample, which increased the chance of getting spurious outcomes within these small profiles (Ferguson et al., 2020). A five-profile solution or beyond was therefore excluded. Based on the BLRT, choosing a three-profile solution would make most sense. However, the AIC, BIC, SSA-BIC and LMRT favoured a four-profile solution. Also, the four-profile solution proved theoretically more interesting than the three-profile solution as the fourth profile is distinctive from the other three profiles. Therefore, the four-profile solution was chosen for further analysis (see Figure 4.2.). Table 4.5. provides an overview of the (co)variances between the valences of the profiles.

Table 4.4.

Model-Fit of the Different Profile Solutions

K	AIC	BIC	SSA-BIC	Entropy	LMRT	BLRT	% smallest cluster
1	17.585.754	17.721.324	17.635.564	n/a	n/a	n/a	n/a
2	17.367.318	17.538.035	17.430.042	0.741	<.001	<.001	25%
3	17.179.658	17.385.522	17.255.295	0.788	<.001	.005	7%
4	17.047.918	17.288.930	17.136.469	0.782	<.001	.070	5%
5	16.901.169	17.177.328	17.002.634	0.801	<.001	.061	3%

The first and second profile are the biggest profiles with respectively 60% and 28% of the participants. The first profile contains the *very optimistic* trainees. Members of this profile scored high on positive valences and low on negative valences. Thus, they foresee strong positive and weak negative feelings and many positive and little negative consequences when they would apply training content in practice. The second profile is described as the *moderately optimistic* trainees. Members of this profile scored high on positive valences and average on negative valences. They seem to experience an average amount of negative feelings and negative consequences and strong positive feelings and many positive consequences when they consider

transferring the training content. Differences between positive and negative valences are smaller in this profile than among the very optimistic trainees.

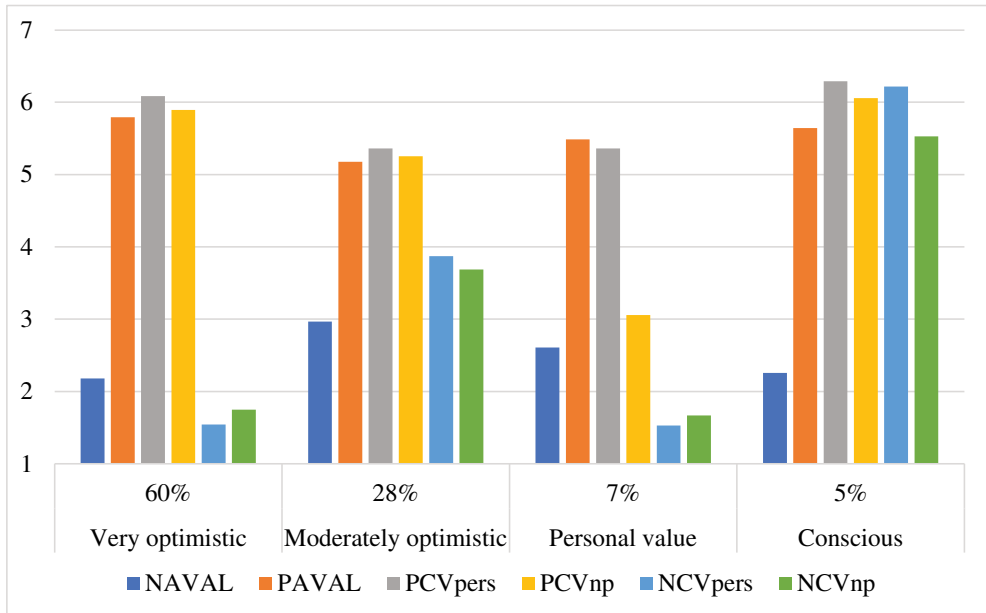
Table 4.5.

Covariances and Variances of the Valences in the Different Profiles.

Covariances	NAVAL	PAVAL	PCVpers	PCVnp	NCVpers	Variance
NAVAL						1.433
PAVAL	-0.316					0.857
PCVpers	-0.152	0.387				1.178
PCVnp	-0.144	0.321	0.692			0.917
NCVpers	0.112	0.016	-0.007	-0.055		0.478
NCVnp	0.140	-0.024	-0.036	-0.084	0.369	0.870

Note. NAVAL = negative affective valence, PAVAL = positive affective valence, PCVpers = positive cognitive valence personal, PCVnp = positive cognitive valence nonpersonal, NCVpers = negative cognitive valence personal, NCVnp = negative cognitive valence nonpersonal.

The third and fourth profile occurred less frequently among participants (respectively 7% and 5% of the participants). The third profile contains the *personal value* trainees. Members of this profile scored high on positive affective valence and personal positive cognitive valence. Moreover, they scored low on nonpersonal positive cognitive valence and the negative valences. This profile shows a clear distinction between personal and nonpersonal positive cognitive valences. Members of this profile seem to be mostly motivated by positive feelings and seeing profits for themselves when they consider using the training content in practice. The fourth profile consists of the *conscious* trainees. Members of this profile scored the highest on both positive and negative cognitive valences and on positive affective valence. Moreover, members of this profile scored low on negative affective valence. Thus, they strongly foresee positive and negative consequences for themselves and others and anticipate strong positive and weak negative feelings when they would apply the training content in practice.

Figure 4.2.*The Indicator Means of the Four Profile Solution*

Note. NAVAL = negative affective valence, PAVAL = positive affective valence, PCVpers = positive cognitive valence personal, PCVnp = positive cognitive valence nonpersonal, NCVpers = negative cognitive valence personal, NCVnp = negative cognitive valence nonpersonal.

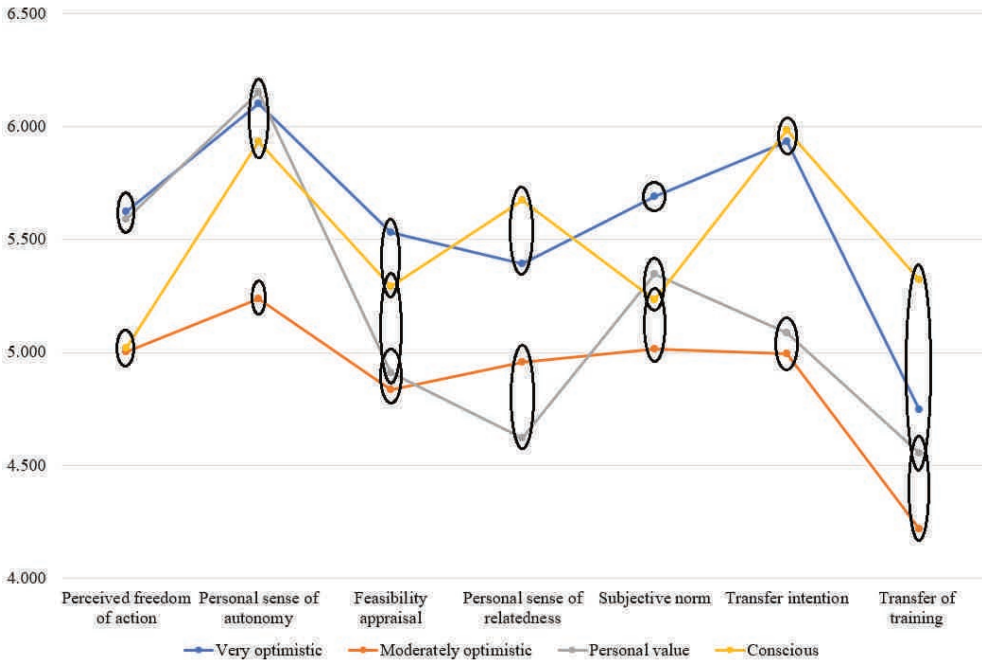
4.3.3. Mean Differences in the Antecedents, Outcome Variables and Demographic Characteristics

As a next step we added the UMTM antecedents, outcome variables and demographic characteristics to the model. Figure 4.3. depicts mean differences between the profiles on the antecedents and outcome variables. In terms of mean patterns, it can be found that the moderately optimistic trainees is a parallel of the mean pattern of the very optimistic trainees. The mean pattern of the personal value and conscious trainees is also largely in line with the mean patterns of the moderately- and optimistic trainees. Yet, the personal value and conscious profiles mirror each other on relatedness and subjective norm. That is, the personal value trainees score relatively low on sense of personal relatedness and relatively high on subjective norm in comparison to the other components for this profile, whereas the opposite is the case for the conscious trainees.

In terms of mean differences between the profiles, the very optimistic trainees score the highest or otherwise belonged to the highest scoring trainees on all antecedents and outcome variables, whereas the moderately optimistic scored the lowest or belonged to the lowest scoring profiles. The personal value trainees scored in between the very- and moderately optimistic trainees on most antecedents and the outcome variables. Moreover, the conscious trainees scored the highest on transfer intention and transfer of training, despite the high scores on negative cognitive valence.

Figure 4.3.

Mean Differences Between the Profiles on the UMTM Antecedents and Outcome Variables.



Note. Means in the ellipses that do not overlap are significantly different from each other.

We also found mean differences between the profiles on the demographic characteristics (see Table 4.6.). Trainees belonging to the personal value profile had significantly more job experience than members of the other profiles. Moreover, they were also significantly older and were more likely to be women than members of the other profiles. In addition, trainees belonging to the conscious profile were significantly younger than trainees in the other profiles.

Table 4.6.*Differences Between Profiles on the Demographic Characteristics*

Variable	Very optimistic trainees (60%)	Moderately optimistic trainees (28%)	Personal value trainees (7%)	Conscious trainees (5%)	Chi-square
Experience (mean)	6.138 _b	5.589 _b	8.642 _a	4.972 _b	8.916*
Age (mean)	40.133 _b	39.238 _b	44.980 _a	34.043 _c	25.857***
Gender (odds of being a female)	1.00 _b	1.45 _a	2.27 _a	0.94 _b	11.469**
Work field (odds of working for the police)	1.00 _a	0.57 _b	0.18 _c	1.20 _a	48.792***
Executive vs supportive (odds of having a supportive job)	1.00 _b	1.23 _b	3.43 _a	0.95 _b	11.510**
Governing vs executive (odds of having an executive job)	1.00 _a	1.81 _a	0.20 _b	1.06 _a	5.642
Governing vs supportive (odds of having a supportive job)	1.00 _a	2.23 _a	0.36 _b	1.10 _a	6.151

Note. Mean scores are significantly different if they have different subscripts. Chi-square indicates the effect size of the mean differences between the profiles. * $p < .05$, ** $p < .01$, *** $p < .001$. In addition, the very optimistic profile was used as reference profile for the odds ratios.

Furthermore, trainees belonging to the very optimistic and conscious profiles were significantly more likely to be working for the police, whereas members of the moderately optimistic and personal value profiles were more likely to work within the judiciary and to be woman. Finally, we also found differences between the profiles in terms of job type. Members of the personal value profile were more likely to have a supportive job and less likely to have executive and governing jobs in comparison to members of the other profiles.

4.4. Discussion

Previous research investigating the association between transfer motivation and transfer of training often found mixed effects for the predictive value of transfer motivation for transfer of training (Gegenfurtner, 2011; Gegenfurtner et al., 2012; Gegenfurtner & Vauras, 2012). One explanation for this is that previous research often approached transfer motivation one-dimensionally (Gegenfurtner & Quesada-Pallarès, 2022) and did not take into account that groups of individuals may differ in the configuration of different types of transfer motivation. The aim of this study was to investigate whether transfer motivation profiles exist and how these profiles differ

on transfer intention and transfer of training. Moreover, we investigated whether profile membership could be explained by the antecedents of the UMTM. We hypothesized that multiple groups of individuals exist that differ in the configuration of affective and cognitive valences. Moreover, we expected that, within profiles, high manifestations of positive affective valence co-occur with low manifestations of negative affective valence, and vice versa. For cognitive valences, on the other hand, we expected that manifestations of positive and negative personal and nonpersonal cognitive valences co-occur independently from each other within profiles. Furthermore, profiles scoring higher on positive valences also contained trainees scoring higher on personal and contextual antecedents. Finally, we hypothesized that profiles scoring higher on positive valences also scored higher on transfer intention and transfer of training.

4.4.1. Distinguishing Motivational Valence Profiles for Transfer of Training

Our first aim was to investigate whether transfer motivation profiles exist. Our results showed that groups of individuals exist that differ in their manifestation of valences for transfer (i.e., transfer motivation) which is in line with our first hypothesis. Four valence profiles with a distinct, theoretically relevant configuration of valences for transfer could be distinguished. These were the 'very optimistic', 'moderately optimistic', 'personal value' and 'conscious' profiles. Finding different profiles for transfer motivation is in line with studies that employ different motivation theories and found motivation profiles for other activities than transferring training content to work practice (e.g., Fryer et al., 2016; Howard et al., 2016; Moran et al., 2012; Parker et al., 2021; Pastor et al., 2007; Tóth-Király et al., 2021; Valero & Hirschi, 2016; Wormington & Linnenbrink-Garcia, 2017). Moreover, it is also in line with the study of Quesada-Pallarès et al. (2022) who also found distinctive transfer motivation profiles.

Most trainees (88%) belonged to the very and moderately optimistic profiles. These profiles have comparable valence configurations that differ in mean scores on the valences. This implies that most trainees do have a relatively comparable valence configuration. The remaining 12% of trainees, belonging to the conscious and personal value profiles, do deviate from the aforementioned two profiles with a different

valence configuration. As such, our outcomes show that groups of trainees can differ in how types of valences for transfer of training manifest themselves in relation to each other.

Furthermore, we found support for our third hypothesis as our results showed independence between the different cognitive valences. Some individuals distinguish between positive consequences for themselves and others (i.e., personal value profile) and some individuals strongly foresee both positive and negative consequences (i.e., conscious profile) for themselves and others when they would apply the training content. This supports the idea of De Brabander and Martens (2014), who theorize that valences might function relatively independent from each other in predicting transfer intention.

However, this only seems to hold for cognitive valence as positive and negative affective valence did not seem to function independent from each other. Consistently across profiles, negative affective valence was lower when positive affective valence was higher. This is in line with our second hypothesis and aligns with the study of Quesada-Pallarès et al. (2022), who found that a low intention to transfer cluster scored lower on positive feelings and higher on negative feelings to transfer in comparison to clusters with a higher intention to transfer. Our outcomes therefore underline a lack of affective ambivalence towards applying training content, in which positive and negative feelings exist concurrently among trainees (Luttrell et al., 2016). On the other hand, this might also be the result of the measure used in our study. We asked participants to rate their positive and negative feelings about applying the training content separately. Yet, participants are not always able to suppress positive feelings when they answer a question about their negative feelings and the other way around (Conner & Sparks, 2002). Moreover, previous research has indicated that ambivalence for exhibiting specific work behavior does exist (Ziegler et al., 2012ab). To test for ambivalence, future studies could use a measure in which participants directly indicate whether they have mixed feelings about applying training content (cf., Riketta & Ziegler, 2006). Eventually, this could provide more insight in the independence of affective types of motivation and the interplay between different types of transfer motivation as conceptualized in UMTM.

4.4.2. Profiles and the UMTM Antecedents

Our second aim was to investigate whether profiles differed in the UMTM personal and contextual antecedents. Our outcomes indicated that members of the profiles differed mostly in level of the antecedents, whereas score patterns were relatively comparable across profiles. Furthermore, trainees with higher scores on the antecedents belonged to profiles scoring lower on negative affective valence and higher on positive valence. This is in line with previous research which also showed that profiles with bigger differences between high and low quality of work motivation scored higher on antecedents of motivation (Graves et al., 2015; Gillet et al., 2018). This was also found for transfer motivation (Quesada-Pallarès et al., 2022). Nevertheless, profiles scoring higher on the personal and contextual antecedents did not necessarily score higher on positive cognitive valence, which is not in line with Graves et al. (2015) and Gillet et al. (2018). As such, we found partial support for our fourth hypothesis.

Instead, it seems that profiles with specific deviations in score patterns of the antecedents also have specific differences in positive and negative cognitive valences. For example, members of the personal value profile scored relatively low on sense of personal relatedness and high on subjective norm in comparison to patterns of antecedents in the other profiles. They also scored low on nonpersonal and high on personal positive cognitive valence. Furthermore, members of the conscious profile scored the opposite on sense of personal relatedness and subjective norm and scored high on both positive and negative cognitive valences. It seems that if trainees feel less connection with colleagues, they also see less meaning for others to apply training content. This would be in line with previous research in which a lower sense of relatedness was negatively associated with a perceived meaningfulness of work (Martela & Riekk, 2018). On the other hand, feeling much connection with colleagues and expecting that colleagues disapprove application of training content might implicate that trainees foresee more negative consequences. For example, as to what extent applying the training content matches with organizational norms (Gilpin-Jackson & Bushe, 2007).

The results underline the potential of enhancing affective and cognitive types of transfer motivation through supporting personal and contextual antecedents.

Moreover, supporting specific personal and contextual antecedents seems to have specific effects on types of transfer motivation. To get more insight in the dynamics of these specific effects, it would be interesting to employ a latent profile analysis to investigate whether specific configurations of antecedents exist and how these influence manifestations of the valences. Previous research among students already indicates that antecedent profiles based on the self-determination theory differ in types of motivation (Hornstra et al., 2021). Eventually, this could indicate whether profiles with specific configurations of antecedents also score differently on affective and cognitive transfer motivation.

4.4.3. Profiles and the Outcome Variables

Our third aim was to investigate whether motivational profiles differed on transfer intention and transfer of training. Our results suggest that multiple types of transfer motivation play a role in transfer intention and transfer of training. This is in line with previous studies (Gegenfurtner, 2013; Gegenfurtner et al., 2009a, 2016; Gegenfurtner & Quesada-Pallarès, 2022; Tafvelin & Stenling, 2021) which underlines the importance of approaching transfer motivation multidimensionally.

More specifically, our outcomes showed that trainees belonging to profiles that scored higher on positive affective valence and lower on negative affective valence score higher on transfer intention and transfer of training. The role of affective valence is in line with previous UMTM research. These studies showed that negative affective valence is a negative predictor and positive affective valence a positive predictor of readiness for action (of which transfer intention is an example; De Brabander & Glastra, 2018, 2021; De Brabander & Martens, 2018). Moreover, our outcomes showed that it also matters whether both personal and nonpersonal positive cognitive valences are high in co-occurrence with a high positive and low negative affective valence. Profiles scoring lower on nonpersonal positive cognitive valences also score lower on transfer intention and transfer of training. As such, our outcomes provide support for our fifth hypothesis and are in line with previous research that indicates that profiles with bigger differences between high- and low-quality motivation scored higher on outcome variables (Graves et al., 2015; Howard et al., 2021). This implies that especially the quality of transfer motivation matters for transfer intention and transfer

of training. This corroborates results of the study of Vansteenkiste et al. (2009) among students who found that primarily quality and not quantity of motivation matters for outcome variables.

However, our results also indicated that high negative cognitive valences in co-occurrence with high positive valences and low negative affective valence (i.e., the conscious profile) seems to be at least as beneficial for transfer intention and transfer of training as high overall positive valences combined with low overall negative valences. Despite the prospect of potential negative consequences as a result of training application, it seems that members of the conscious profile still intended to apply training content and eventually also transferred training content, which could indicate that this group cares less about possible adverse consequences. This outcome contradicts the notion that primarily quality of motivation matters (Vansteenkiste et al., 2009) and indicates that also quantity of motivation plays a role. Interestingly, trainees in this group were younger than members of the other groups. The socioemotional selectivity theory of Carstensen (2006) states that if individuals perceive themselves as having more time left to spend on their work career that they are more willing to pursue skill acquisition. They might therefore be more easily motivated to transfer and more easily transfer training content regardless of the negative consequences. It would be interesting for future research to investigate among this group of trainees how possible positive and negative consequences are considered in the decision-making process of transferring training content. This could give us more insight in the interplay between positive and negative cognitive valences and whether making trainees more aware of possible adverse consequences resulting from applying training content could enhance transfer intention and transfer of training.

Finally, our results showed that differences between profiles were bigger for transfer intention than transfer of training. This could be due to changes in configurations of the valences over time. Trainees might become less motivated to use training content in practice, resulting in smaller differences between profiles in transfer of training. Even though previous profile research showed that work motivation profiles remained relatively stable (Fernet et al., 2020; Howard et al., 2021),

it would be interesting for future research to apply a latent transition analysis (cf. Fernet et al., 2020) to investigate how stable transfer motivation profiles are over time and to what extent trainees change between profiles. Moreover, even if the profiles remain stable, changes in the magnitude of the association between transfer motivation, transfer intention and transfer of training might explain changes between profiles on transfer intention and transfer of training over time. As such, it is also important to investigate the stability of associations between these components. If the association between transfer motivation, transfer intention and transfer is stable and if the profiles remain stable, this will give us more certainty that interventions aimed at trainees with specific motivation profiles can have utility.

4.4.4. Practical Implications

Based on our results, we recommend trainers and policy makers to improve the quality of motivation. This can be achieved by providing support with respect to the different personal and contextual antecedents among all trainees. However, our results indicate that it is also useful that trainers differentiate among specific groups of trainees in the emphasis that is placed on specific antecedents. For example, trainees with a personal value profile would require more support for enhancing perceived external support, sense of personal competence (i.e., feasibility appraisal) and sense of personal relatedness in comparison to members of other profiles. Perceived external support could be enhanced by ensuring that supervisors encourage trainees to use training content and sharing feedback towards trainees about using training content (Grossman & Salas, 2011). Sense of personal competence could be stimulated by setting goals at the end of the training as to what trainees want to achieve through transferring training content (Brown & Warren, 2009). Sense of personal relatedness could be supported by emphasizing that colleagues should take more time to listen to each other and that colleagues should signal more often that they are genuinely interested in each other (Jungert et al., 2018).

Trainers could also differentiate among trainees belonging to the conscious profile. Among these trainees, more emphasis should be placed on supporting more freedom from the work environment and by providing more support for subjective norm. Autonomy could be supported by ensuring that colleagues and managers use

non-controlling language, provide meaningful rationales and providing more choices when employees aim to transfer training content (Jungert et al., 2020). Subjective norm could be supported by ensuring that multiple colleagues and supervisors of the same organization participate in the training. This can increase the chance that its content fits within norms of the organization (Gilpin-Jackson & Bushe, 2007) and can stimulate positive attitudes among employees towards applying the content (Salamon et al., 2022a). Finally, our results underline that demographic characteristics such as age, gender, experience and type of work matter for which specific antecedents should be supported to enhance transfer motivation among specific trainees. Trainers could therefore form more homogeneous groups regarding the aforementioned demographic characteristics. Based on this, it is more convenient for trainers to focus on enhancing specific antecedents for specific groups of trainees to enhance their transfer motivation and eventually transfer of training in comparison to when groups are demographically more mixed.

4.4.5. Limitations and Future Research

Our study contains some limitations that should be taken into account. Firstly, due to limitations in sample size, we used a parameterization for the latent profile analysis in which the between-profile (co)variances were restricted to be equal. This can have implications for the profile solutions found in the LPA. For example, Vermunt and Magidson (2002) demonstrated in their simulation study that unrestricted between-profile covariances can result in fewer profiles than when between-profile covariances are constrained to be equal. Differentiating variances and covariances between profiles may therefore lead to a different number of profiles. Yet, the aim of this study was to examine if transfer motivation profiles exist and what effects these profiles have on relevant motivational variables. The aim was not to indicate which specific profiles exist within the population. To get more insight in the latter question, future research should use bigger sample sizes to apply more complex parameterizations.

Secondly, our study did not take other components into account that could explain profile membership. For example, training quality can be predictive for transfer motivation (Gegenfurtner et al., 2009b) and transfer of training (Velada et al.,

2007). In addition, the extent to which a training is attended voluntarily or mandatorily might also have a predictive value for transfer motivation (Curado et al., 2015; Gegenfurtner et al., 2016) and transfer of training (Gegenfurtner et al., 2016). Future studies should take these components into account to investigate the influence they have on profile membership.

Thirdly, due to a lack of empirical evidence regarding the causal relationships between the UMTM components, all variables but the valences were investigated as auxiliary variables in the latent profile analysis. As a result, it is not possible to investigate the predictive value of the personal and contextual antecedents for profile membership and whether the profiles predict the outcome variables. More research into the UMTM is needed to further investigate the cause-and-effect relationship between its components. This can be done through conducting more longitudinal or experimental research.

4.5. Conclusion

To sum up, our study has shown that transfer motivation not only differs in kind (Gegenfurtner 2013; Gegenfurtner & Quesada-Pallarès, 2022) but also differs among specific groups of individuals. These groups score differently on personal and contextual antecedents, transfer intention and transfer of training. Our outcomes show that it is too simplistic to assume that individuals with higher scores on the antecedents score higher on transfer motivation and also score higher on transfer intention and transfer of training. Instead, there seem to be interactions between different types of transfer motivation and that multiple configurations of transfer motivation can result in a comparable transfer intention and transfer of training. These insights underscore the utility of using a person-centered approach for investigating types of transfer motivation and extends our knowledge on the dynamics of the UMTM. Such nuances can only be found when transfer motivation profiles are investigated. We encourage other researchers to apply this method to acquire more guidelines as to how transfer of training interventions should be tailored to specific groups of trainees to stimulate their affective and cognitive types of transfer motivation. This eventually can enhance the transfer of trainings and contribute to that trainings will have more impact in organizations.