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# Do Overwhelmed Expatriates Intend to Leave? The Effects of Sensory Processing Sensitivity, Stress, and Social Capital on Expatriates' Turnover Intention

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*Expatriates need to deal with numerous stimuli resulting from new environmental and cultural influences abroad, contributing to stress and high rates of failure and turnover. Based on conservation-of-resources theory, this study aims to explore the role of resources (including sensory processing sensitivity (SPS) and social capital) in explaining expatriates' perceived stress and turnover intention. This is the first study to examine the personality trait SPS in the field of expatriate management. High-SPS individuals tend to be easily overwhelmed by novel stimuli. Based on a dataset of 311 expatriates, structural equation model (SEM) and mediation analyses proved full mediation of the positive relation between SPS and turnover intention through perceived stress. Moreover, stress fully mediated the negative relation between bonding social capital and turnover intention. While 20% of the domestic population are assumed to show high SPS, we found a 26.4% ratio in our expatriate sample. Implications for both management and research are derived.*

**Keywords:** sensory processing sensitivity; turnover intention; stress; social capital; conservation-of-resources theory

## Introduction

While various definitions of the expatriation concept exist, they all have the expatriate's deployment in a foreign country in common (e.g., Andresen *et al.*, 2014). Getting along in a new country can be both challenging and emotionally demanding to expatriates for several reasons (e.g., Caligiuri, 2000; Haslberger *et al.*, 2013). For instance, an expatriate is exposed to unfamiliar and often unknown environmental influences (Bhaskar-Shrinivas *et al.*, 2005), has to adjust to a different culture, including a foreign language and different behaviors, core values, beliefs, customs, rituals, and, therefore, needs to establish new social ties in order to get access to information that helps to adapt successfully (Bhatti *et al.*, 2013). Insufficient cross-cultural adjustment has been shown to be a main reason for most premature returns of expatriates (Bhanugopan and Fish, 2006) and for turnover intentions during assignments (Ritchie *et al.*, 2015). A Deloitte survey (2012) found that in 64% of the 77 organizations

surveyed, less than half of assignments terminate prematurely, with employee adaptation problems being causal for 28% of the early terminations.<sup>1</sup> Early terminations not only cause direct (up to US\$ 1 million per expatriate failure; for an overview see Vögel *et al.*, 2008) but also indirect costs (e.g., damaged relations to the host country's customers, loss of business opportunities; Shen, 2005; Kataria and Sethi, 2013) for organizations.

In view of the costs resulting from turnover during international assignments, knowing more about its antecedents seems to be valuable for international human resource management to derive counteractions. Within the domestic context, Zimmerman (2008) meta-analytically showed that ('bright' sides of) personality traits influence the individual's turnover decision and behavior. Woo *et al.* (2016) found that the 'dark' side of personality traits might be at least equally informative as their 'bright' side in predicting turnover outcomes.

<sup>1</sup>Please note that surveys as KPMG (2015) found an early termination rate of less than 5% in most companies, however, they explicitly asked for organizational reasons (bad performance) to relocate the assignee back home or to dismiss him/her. Turnover or termination initiated by the assignee were not part of the study.

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One trait that especially relates to the use of withdrawal strategies is sensory processing sensitivity (SPS; Aron, 1996). This personality trait depicts greater awareness of sensory stimulation, behavioral inhibition, and a deeper cognitive processing of environmental stimuli, leading to higher emotional and physiological reactivity (Aron and Aron, 1997; Aron *et al.*, 2012). As highly sensitive persons (HSPs) can be easily overwhelmed and stressed by new and/or intense environmental or social stimuli (Aron *et al.*, 2012), for example, resulting from interactions with foreigners in a little acquainted culture, this trait seems to be especially relevant to predict withdrawal coping strategies such as expatriates' turnover intention. However, withdrawing does not only apply to leaving the current environment, but is also reflected in stepping back from social interactions. As a result, HSPs might build less social capital during international assignments, which has been shown to reduce turnover intentions (Moynihan and Pandey, 2008).

The intention to leave a foreign country by prematurely returning to the home country or by transitioning to a new employer in the host country can be seen as a coping strategy to avoid stress (Lazarus and Folkman, 1984; Pienaar, 2008). The environment determines the effectivity of coping in resolving a stressful problem (Forsythe and Compas, 1987; Pienaar, 2008). Thus, expatriates may be susceptible to withdraw themselves from the stressful situation more often when the perceived stress is high (e.g., Ingledew *et al.*, 1997). Both SPS (e.g.,  $\beta = 0.40$ , Gerstenberg, 2012) and bonding social capital (e.g.,  $\beta = -0.33$ , Chen *et al.*, 2015), are directly linked to stress, which in turn positively relates to turnover intention (e.g.,  $\beta = 0.13$ , Avey *et al.*, 2009).

How and whether these factors work together in the expatriate context has not been previously addressed in scientific literature. Further, while it is estimated that about 20% of people show high degrees of SPS (e.g., Acevedo *et al.*, 2014), the scientific literature did not consider this trait in the context of (international) human resource management and organizational behavior at all. Accordingly, the effects of SPS on expatriates are unknown, but supposedly affect a significant number of employees. Hence, there is a need for clarification to explain expatriate turnover during their stay abroad to a higher degree and, thus, to get the knowledge to counteract expatriates' turnover in order to avoid its induced costs.

In this respect, we want to take a first look into the topic by examining the effects of SPS on expatriates' turnover intention and its supposed antecedents, namely perceived stress and bonding social capital. To do so, we draw on Hobfoll's (1989) conservation-of-resources (COR) theory, assuming SPS and bonding social capital to be resources as will be discussed below. We aim to examine these effects conducting a quantitative survey of both,

inter and intra-organizational expatriates. The purpose of our study is threefold: (1) we strive to reveal the effect of resources, that is, SPS and social capital, on stress and turnover intention; (2) we want to raise awareness of the trait SPS in research in the field of human resource management and, especially, expatriate management; and (3) we will deduce implications for expatriate management practice to support the transfer of our results.

In the following, we will give a closer insight into the trait SPS and theoretically connect it to perceived stress and bonding social capital by referring to COR theory. Moreover, we argue for the effects of social capital on perceived stress. Next, we hypothesize for influences of SPS and stress on turnover intention and present the study's underlying research model. After describing the methodology of our study, we will at first conduct latent profile analysis to determine the number of highly sensitive expatriates in our sample. Next, we present the results of data analysis testing a structural equation model and conducting mediation analyses using the phantom model approach. Lastly, we critically discuss our results, point out limitations of our study and deduce implications for future research and expatriate management practice.

## Towards a research model of expatriates' sensory processing sensitivity

### *SPS and bonding social capital as antecedents of perceived stress*

In his COR theory, Hobfoll (1989: 516) posits that individuals 'strive to retain, protect, and build resources'. As a result, an environment that makes the individual expect a potential or an actual loss of resources or an investment of resources without being able to gain additional resources induces stress (Hobfoll, 1989, 2001). Resources are objects, conditions, personal characteristics, or energies valued by the individual (Hobfoll, 1989; Diener and Fujita, 1995), which can either be valued by itself or help to achieve desired goals (Hobfoll, 2002).

In our study, we focus on two constructs – SPS and bonding social capital – aiming to integrate them into COR theory. Social capital comprises a resource dimension itself (Lin, 2001) as transferring information or knowledge within one's network is considered useful for attaining one's goals (Burt, 2007). Especially having close and trustful social relations (bonding capital; Putnam, 2000) can be helpful in terms of getting emotional support and coping assistance strategies (Thoits, 2011). Thus, bonding social capital represents a resource according to COR theory, as it provides access to other resources, for instance companionship, loyalty of friends, and people one can learn from (for an overview

of resources, see Hobfoll, 2001: 342). To see if SPS is a resource, we will need to define the trait at first.

Currently, three popular theoretical frameworks related to variability in environmental sensitivity exist. The sensory processing sensitivity (SPS; Aron, 1996) framework is based on a personality perspective. According to the SPS framework, about 20% of individuals have a stable personality trait of high-sensitivity that involves a deeper cognitive (also not necessarily conscious) processing of internal and external environmental stimuli across a wide variety of situations, leading to higher emotional, biological, or stress reactivity (Aron and Aron, 1997; Aron *et al.*, 2012; Acevedo *et al.*, 2014). Belsky's differential susceptibility theory (Belsky, 1997, 2005; Belsky *et al.*, 2007; Belsky and Pluess, 2009, 2013; Ellis *et al.*, 2011) suggests individual differences in their environmental sensitivity. In line with the theory, phenotypic temperamental characteristics, endophenotypic attributes, and specific genes tend to work like 'plasticity factors', resulting in that some individuals are generally more vulnerable to various positive and negative influences of the environment (Belsky and Pluess, 2009). The biological sensitivity to context theory (Boyce and Ellis, 2005) postulates that individuals differ in their biological sensitivity to the environment, with a propensity to positive reactions under environmental conditions of protection and support, and to negative reactions under conditions of adversity in the environment. Thus, differences in susceptibility to environmental influences are led back to genetic conditions by both SPS and differential susceptibility theory (Aron and Aron, 1997; Belsky, 1997; Aron *et al.*, 2012), whereas the environment is seen to determine individual differences over the course of time by biological sensitivity to context theory (Boyce and Ellis, 2005). SPS, differential susceptibility theory, and biological sensitivity to context theory have two main similarities: (1) each give particular theoretical insights into the concept of environmental sensitivity; and (2) each focuses on the notion of individual differences of sensitive persons in their response to negative environmental influences or environmental adversity (vulnerability-stress model; Zuckerman, 1999) and to positive, supportive and/or enriching aspects of the environment (vantage sensitivity; Pluess and Belsky, 2013; Pluess and Boniwell, 2015; Pluess, 2017). These responses are supposed to be related to different effects: Whereas conditions of environmental adversity are generally linked to negative health effects, positive health effects emerge under conditions of support and protection (Zuckerman, 1999; Pluess and Belsky, 2013; Pluess, 2015, 2017; Pluess and Boniwell, 2015). Thus, the frameworks encompass both the 'dark side' of environmental susceptibility in referring to response to negative experience, and to its 'bright side' or response to positive experiences and exposures

(Bakermans-Kranenbug and van IJzendoorn, 2011). Only the SPS framework emphasizes the presence of one stable personality trait and focuses the aspect of cognitive processing.

SPS has been hypothesized to be the manifestation of a highly sensitive central nervous system, on which environmental influences register more easily and deeply (Aron *et al.*, 2012). That is, looking at the 'bright' side of SPS, high-SPS individuals tend to be more reflective than low-SPS ones (Aron *et al.*, 2010, 2012). This processing of even subtle stimuli on a deeper cognitive level supports HSPs in enhanced learning from information and, thus, gives them advantages in reacting to present or similar future situations (Acevedo *et al.*, 2014). Going along with this trait, further strengths of HSPs are, as theorized by Aron (1996), for example, being better at spotting and avoiding errors, higher conscientiousness, being self-reflective, and being more empathic than less sensitive persons. Thus, highly sensitive expatriates can be expected to be, to a higher degree, aware of details and, hence, to be able to react to stimuli in a more nuanced, adequate way compared to low-SPS expatriates (see Aron, *et al.*, 2010). Since highly sensitive individuals process information more deeply, they were shown to understand another culture without the need to refer to the own culture and, as a consequence, to be less affected by cultural context (Aron *et al.*, 2010). This might be useful working in a foreign environment and hence, drawing on COR theory, sensitivity represents a resource, because the individual would appreciate this trait for itself or for its support in achieving his or her goals (Hobfoll, 2002).

However, like many other personality traits SPS also shows to have a 'dark' side. In the domestic context, several studies found that SPS strongly relates to and increases stress (e.g.,  $r = 0.482$ , Benham, 2006;  $\beta = 0.40$ , Gerstenberg, 2012). As expatriates have to deal with a large number of new situations and stimuli abroad, in addition to the common stressors that also prevail in the domestic context, the deeper processing of high amounts of stimuli as typical for high-SPS expatriates might exhaust and overwhelm them, and thus, lead to even higher stress levels (Aron, 1996). Following these results, we expect that this effect will overshadow the positive effects of the SPS trait on perceived stress.

**Hypothesis 1.** Sensory processing sensitivity positively relates to expatriates' perceived stress level.

As shown, bonding social capital is a resource according to COR theory, in that it 'provide[s] or facilitate[s] the preservation of valued resources' (Hobfoll, 1989: 517). Putnam (2000) defines social capital as social networks and their associated norms of

reciprocity. He distinguishes between bridging and bonding social capital. The first is inclusive and describes the breadth of relationships. Large bridging capital helps individuals to access required information or resources (Williams, 2006). Thus, bridging capital shows similarities to Granovetter's (1973) weak ties. By contrast, the resource bonding capital is exclusive and describes the depth of relationships (Putnam, 2000). According to Putnam (2000), it provides strong emotional support and mobilizes solidarity. Consequently, bonding capital shows similarities to Granovetter's (1973) strong ties.

We expect high and low-SPS individuals to differ regarding the building of social capital abroad. Since HSPs are characterized by a deeper cognitive processing of information (Aron *et al.*, 2012), they need more time to process information. Thus, HSPs mostly follow a 'pause to check' strategy when confronted with new situations or new stimuli and avoid overstimulation (Aron and Aron, 1997; Aron *et al.*, 2012). In consequence, sensitive persons often appear to be shy or social introverts. However, Aron and colleagues found that the resource SPS and shyness or social introversion are related, yet distinct concepts (Aron and Aron, 1997; Aron *et al.*, 2005). Thirty per cent of HSPs are extraverted, while the remaining 70% tend to be introverted (Aron, 1996). Given the close relation of SPS and introversion, and that HSPs tend to withdraw from overstimulating situations to avoid becoming overly aroused (Aron, 1996), we expect that high-SPS expatriates tend to build up a small number of strong ties and need more time to develop these strong social ties. Thus, we hypothesize that:

**Hypothesis 2.** Sensory processing sensitivity negatively relates to expatriates' bonding social capital.

We decided to include only the bonding capital resource (depth of relationships) into our research model and to exclude bridging capital (breadth of relationships) for three reasons. First, Myers (1999: 375) refers to a 'pan-human quest for enduring, close relationships', emphasizing the value of the bonding capital resource for individuals. Second, Chen and colleagues (2015) found no significant relation between perceived stress and bridging capital ( $r = 0.02$ , ns), but a significant relation with bonding capital ( $r = -0.33$ ,  $p < 0.05$ ). Third, trust relationships negatively affect turnover intention ( $\beta = -0.44$ , Yang *et al.*, 2011). Considering bonding social capital as a resource in the meaning of the COR theory, the greater the available resource the higher the chances that the individual builds up other resources (Hobfoll, 1989). Thus, this potential increase in resources should decrease the perceived stress of the expatriate.

**Hypothesis 3.** Bonding social capital negatively relates to perceived stress of expatriates.

*SPS, stress, and bonding social capital as antecedents of turnover intention*

According to COR theory (Hobfoll, 1989), stress occurs when the individual is threatened to lose or actually loses resources. Withdrawing from the host organization is a form of avoidance coping (Pienaar, 2008) that serves to counteract negative effects of stress (Lazarus and Folkman, 1984) and to avoid a further loss of resources. Elangovan (2001: 159) defines the intention to withdraw (turnover intention) as 'an attitudinal orientation or a cognitive manifestation of the behavioral decision to quit'. Premature exit can be caused, according to Bhanugopan and Fish (2006), by potentially stressful situations that might occur in any new environment and can be overwhelming. Thereby, they do refer to any, high as well as low-SPS, expatriate. However, because HSPs are aware of and more reactive to both positive and negative stimuli to a higher degree (Jagiellowicz *et al.*, 2016), they are by their nature more prone to be overwhelmed (Aron, 1996). Thus, high-SPS expatriates are expected to be stressed more frequently in the new environment abroad. Further, they are cognitively more aware of their environment and its potential negative effects on them. In the context of expatriation, this might have two consequences. First, it seems plausible to assume that high-SPS individuals may decide not to become an expatriate at all, because they are aware of the stressors entering a new cultural environment. Thus, we need to check the ratio of high-SPS expatriates. Second, high-SPS expatriates might comparably be more likely to feel a potential loss of resources during their stay abroad.

Sulsky and Smith (2005: 181) emphasize the initial realization of an existing challenging situation as a 'coping trigger'. Realizing the existence of a stressor entails being aware of a need for reaction and, thus, results in coping (Pienaar, 2008). Hence, we expect high-SPS expatriates more often than low-SPS expatriates to choose avoidance coping as a strategy to resolve a stressful situation abroad. Moreover, we expect perceived stress to partially mediate the positive relation between SPS and turnover intention. That is, we propose that there will remain a significant direct effect of SPS on turnover intention, because HSPs are highly self-reflective (Aron, 1996) and, thus, aware of their personality and its possible effects. Hence, they might act preventively using an avoidance coping strategy to manage their resources, before the actual stressors arise.

**Hypothesis 4a.** Sensory processing sensitivity positively relates to expatriates' turnover intention.

**Hypothesis 4b.** Perceived stress partially mediates the positive effect of sensory processing sensitivity on expatriates' turnover intention.

As bonding social capital is a resource in the COR theory, it supports the individual in achieving its targets. For instance, strong social ties provide emotional support (Williams, 2006) that can help the expatriate getting along in a new environment. Consequently, bonding capital serves to restrain stress (e.g. Chen *et al.*, 2015) and, hence, less avoidance coping in terms of turnover intention is needed. Thus, we assume that stress fully explains this relation and we hypothesize:

**Hypothesis 4c.** Perceived stress fully mediates the negative effect of bonding social capital on expatriates' turnover intention.

Figure 1 shows the hypothesized relations between the constructs under study.

## Research methodology

### Data collection and sample

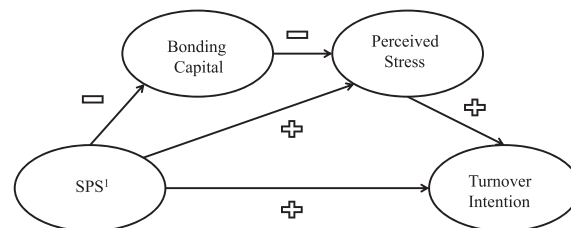
We used a quantitative study to test our hypotheses. We distributed our online-questionnaire to expatriates by using various organizations in contact with expatriate managers as multipliers of our survey (e.g., chambers of commerce, expatriate communities, online platforms, which focus on expatriate topics, e.g., expatica.com). We only included responses into our sample from participants who executed legal work abroad and had lived in the current foreign country for at least six months and ensured to cover the expatriate definition by Andresen *et al.* (2014). Using a length of stay abroad of at least six months as a criterion, we wanted to ensure that there was enough time for expatriates to form strong social ties, thus, allowing us to measure potential differences in bonding social capital between high- and low-SPS expatriates. It seems to be reasonable when studying stress during a stay abroad that this variable needs a certain

amount of time to develop to an unbiased state, for example, reducing effects of stress that occurred during the relocation process.

Three hundred eleven expatriates (180 male, average age  $M = 37.22$  years,  $SD = 9.81$ ) met our requirements. There were 32 top-level, 32 third lowest level, 29 second lowest, and 71 lowest management level expatriates taking part in our study, 42 expatriates could be assigned to a technical hierarchy level (105 no indication). Taking a closer look on the educational background, 15 participants held a PhD or higher degrees, 113 a Master's degree or similar, 52 a Bachelor's degree or similar, and seven had an upper secondary school degree (124 no indication). Participants out of 39 nations (115 Germans, 36 US-Americans, 18 UK citizens, and 113 others, 29 no indication) answered our questionnaire in English. Respondents were dispersed across 44 countries including Germany (57 participants), China (32), and the USA (20) as the most frequent locations. The mean total expatriate experience was 5.93 years ( $SD = 6.49$ ), and the current duration of the recent assignment was 3.41 years ( $SD = 3.95$ ). Eighty eight expatriates moved abroad within their organization (organizational expatriates, i.e., assigned and intra-self-initiated expatriates) and 88 expatriates changed employers while moving abroad (external expatriates, i.e. inter-self-initiated and drawn expatriates; see Andresen *et al.*, 2014).

### Measures of (in-)dependent variables

To measure SPS, we used an 11-item, short scale (Aron *et al.*, 2010) relying on the original 27 items by Aron and Aron (1997) and selected on the basis of their particularly high correlation with the overall scale total in studies with large samples. A sample item is 'I become unpleasantly aroused when a lot is going on around me'. The shortened version of the scale is considered to be unidimensional, whereas the dimensionality of the long version has been questioned. For example, Smolewska *et al.* (2006) distinguished three factors (i.e., Ease of Excitation, Aesthetic Sensitivity, and Low Sensory Threshold). Considering the latter differentiation, six items in the short version pertain to the factor Ease of



Note. <sup>1</sup>Sensory processing sensitivity.

**Figure 1** Hypothesized relations between the variables under study

Excitation, four correspond to the Low Sensory Threshold factor, and one item, to Aesthetic Sensitivity factor. All items in our study were rated on a 7-point Likert scale from 1 = not at all to 7 = extremely.

To measure *turnover intention*, we included the 3-item scale of the Michigan Organizational Assessment Package by Nadler *et al.* (1975) in our questionnaire (sample item: 'I often think about quitting'). Previous research indicates its reliability and validity (Khan and Ali, 2013). All items were rated on a 5-point Likert scale from 1 = strongly disagree to 5 = strongly agree.

Assessing *perceived stress*, we used the PSS-10 by Cohen and Williamson (1988) consisting of 10 items (sample item: 'In the last month, have you felt nervous and stressed?'). Previous research indicates its excellent construct validity and reliability (e.g., Williams, 2006). All items were rated on a 5-point Likert scale from 0 = never to 4 = very often. We reversed the four positively formulated items before data analysis.

Finally, we measured *bonding social capital* adapting the 10-item high reliable and well validated scale by Williams (2006). Sample item is 'There are several people I trust to help solve my problems'. All items were rated on a 5-point Likert-scale from 1 = strongly disagree to 5 = strongly agree. Two items of the scale are negatively formulated and, thus, were reversed before analysis.

### Control variables

We used several variables to control for the influences of the independent on the dependent variables. Specifically, we controlled for gender, expatriate type, years being an expatriate, duration of the current assignment, neuroticism, and cultural distance. *Gender* was coded as a dummy variable with 0 = female and 1 = male. *Expatriate type* was coded as a dummy variable with 1 = organizational expatriates and 0 = external expatriates. To calculate the *years a participant spent working as an expatriate*, we asked to indicate all periods, in which the participant gained work experience abroad in the past. Relying on these data, we manually calculated this variable by adding the periods. We measured *neuroticism* using a 3-item short scale by Aron and Aron (1997). Sample item is 'Are you a tense or worried person by nature?' All items were rated on the standard 5-point scale from 1 = strongly disagree to 5 = strongly agree.

Lastly, we controlled for *cultural distance*, a construct that denotes differences between a host and home country in basic aspects of culture, including beliefs, core values, customs, rituals, as well as political, economic, and legal systems (Adler, 2008). Cultural distance is relevant in the context of expatriates' work adjustment (Chen *et al.*, 2010) and job satisfaction (Froese and Peltokorpi, 2011), which both relate to turnover intention (e.g., Ritchie *et al.*, 2015; Zhu *et al.*, 2015). We calculated cultural

distance according to the approach of Kogut and Singh (1988) using Hofstede *et al.*'s (2010) dimension scores of the expatriates' origin and host country.<sup>2</sup>

### Analytic procedures

Analyzing the data, we first performed confirmatory factor analysis (CFA) and reliability analyses to check for data accuracy. To assess reliability, we calculated composite reliabilities instead of Cronbach's alpha, because composite reliabilities deliver better estimates of true reliability (Peterson and Kim, 2013).

Next, to tackle the question on how many expatriates are highly sensitive, we perform latent profile analysis (LPA) on the SPS scale using MPlus 7. Similar to factor analysis, this procedure uses a set of continuous items to determine a latent factor (Marsh *et al.*, 2009); however, this latent factor is of a categorical nature. As LPA is a person-centered approach, it allows to us to sort the expatriates into groups of individuals being similar to each other and different to the ones in other groups (e.g., Muthén and Muthén, 2000; Lubke and Muthén, 2005). LPA is a model-based approach and, thus, researchers can make informed decisions on the number of classes by comparing fit indexes and drawing on theory, previous research and interpretation of the results (Marsh *et al.*, 2009). Relevant fit indexes are the Lo *et al.* (LMR; 2001) log-likelihood ratio test (LRT) as well as information criterion indexes, namely the Bayesian information criterion (BIC) and Akaike's information criterion (e.g., Collins *et al.*, 1993; Henson *et al.*, 2007). Furthermore, entropy indices should also be considered (Reinecke, 2006).

To check our hypotheses, we tested the proposed research model using SPSS AMOS 23.0. That is, we tested the structural equation model (SEM) with maximum likelihood estimation controlling for the variables mentioned above. Furthermore, to test the hypothesized mediating effects, we followed the phantom model approach (Macho and Ledermann, 2011), because AMOS is by default not able to assess indirect effects of more than one mediator separately. Phantom models are slightly changed, constrained copies of the main model composed of latent variables only. For instance, testing the indirect effect of SPS via stress on turnover intention, we deleted the paths from SPS to bonding capital and to turnover intention in the phantom model. We bootstrapped the indirect effect based on 5,000 samples and estimated parameters using bias-corrected 95% confidence intervals (MacKinnon *et al.*, 2002).

<sup>2</sup>We accessed the required data matrix via the Hofstede's homepage (Hofstede, 2015).

Preliminary analysis

We conducted the CFA with our main constructs – SPS, bonding capital, perceived stress, and turnover intention – and with neuroticism. All of them are, by theory, meant to be unidimensional (Nadler *et al.*, 1975; Cohen and Williamson, 1988; Aron and Aron, 1997; Williams, 2006). However, Taylor (2015) found evidence for perceived stress being best described by a two-factor model. Hence, we treated perceived stress as a second order construct in our analysis with the two subscales ‘perceived helplessness’ and ‘perceived self-efficacy’ (Taylor, 2015). The model fit of the CFA is  $\chi^2 = 838.23$ ,  $df = 537$ ,  $p < 0.001$ ,  $\chi^2/df = 1.561$ , CFI = 0.936, TLI = 0.929, and RMSEA = 0.043. Thus, the CFA indicates an acceptable to good fit with  $\chi^2/df \leq 2.0$ , CFI and TLI being close to 0.95, and RMSEA  $\leq 0.08$  (Marsh *et al.*, 2004). The fit of the one-dimensional model was unsatisfactory ( $\chi^2 = 3186.19$ ,  $df = 629$ ,  $p < 0.001$ ,  $\chi^2/df = 5.065$ , CFI = 0.456, TLI = 0.424, and RMSEA = 0.114). Due to poor factor loadings, we deleted two items (one item of SPS and one item of bonding capital). Further, we had to add eleven error term covariances (six for SPS, one for stress, four for bonding capital).

Next, with the latent profile analysis on the ten items measuring SPS we extracted information on the amount of highly sensitive expatriates in our sample. Table 1 offers an overview of the different models testing one to five class solutions. Statistically, a four-classes solution shows the best fit (LMR  $p = 0.0015$ , AIC = 10707, BIC = 10904) as AIC and BIC are lower than this indexes of models with less classes and the LMR  $p$ -value of the five-classes is not significant ( $p = 0.3447$ ), what indicates that adding one more class to the four-classes model does

not improve the model. However, the jump in AIC and BIC between a 3-class and a 4-class solutions is nearly half as large as between a 2-class and a 3-class solution giving a hint that a 3-class solution might be best.

Following Marsh *et al.* (2009), researchers making decisions on the number of classes should also consider interpretability of LPA’s results. Figure 2 shows the group means on the specific SPS items comparing a 3-class and a 4-class solution. As we can see, a 3-class solution depicts classes of expatriates being either high, moderate, or low in SPS. The 4-class solution is somewhat harder to interpret. Clearly, there is again the high-moderate-low distinction, but another class arises showing mainly moderate means with exception for two items. In these two items (‘uncomfortable by loud noises’; ‘bothered by intense stimuli’) the class shows slightly higher average means than the high-SPS class. However, as we cannot ground this phenomenon on theory, we decided to stay with the 3-class solution. Hence, we had 82 expatriates (26.4%) in our sample than can be assigned to the group of highly sensitive persons.

Results

Table 2 presents descriptive information on the variables used in our study. The composite reliability of all constructs exceeds the 0.7 value recommended by Nunnally and Bernstein (1994). Hence, construct reliability is given. Taking a closer look on the correlation matrix, all latent variables, except for bonding capital and turnover intention, correlated significantly. Further, gender shows negative correlation with neuroticism ( $r = -0.26$ ), SPS ( $r = -0.23$ ), perceived stress

Table 1 Results of latent profile analysis using the SPS items

| Classes | AIC   | BIC   | LMR          | Entropy | n for each class (c)                         |
|---------|-------|-------|--------------|---------|----------------------------------------------|
| 1       | 11910 | 11985 | –            | –       | c1 = 311                                     |
| 2       | 11069 | 11185 | $p = 0.0000$ | 0.804   | c1 = 190, c2 = 121                           |
| 3       | 10857 | 11014 | $p = 0.0009$ | 0.856   | c1 = 111, c2 = 118, c3 = 82                  |
| 4       | 10707 | 10904 | $p = 0.0015$ | 0.868   | c1 = 106, c2 = 57, c3 = 102, c4 = 46         |
| 5       | 10662 | 10901 | $p = 0.3447$ | 0.892   | c1 = 103, c2 = 26, c3 = 98, c4 = 37, c5 = 47 |

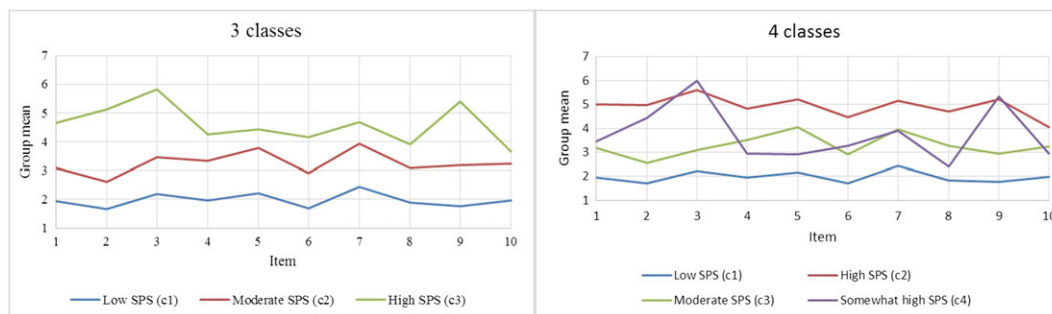


Figure 2 SPS items and group means of the LPA-classes [Colour figure can be viewed at wileyonlinelibrary.com]

( $r = -0.24$ ), and turnover intention ( $r = -0.15$ ), in that males show lower scores in this variable compared to females. Additionally, organizational expatriates show lower scores in neuroticism ( $r = -0.17$ ), perceived stress ( $r = -0.18$ ), and turnover intention ( $r = -0.17$ ) compared to external expatriates. Surprisingly, assignment duration and years as an expatriate as well as cultural distance do not correlate significantly with variables of interest. Lastly, we notice that neuroticism and SPS are highly, but not perfectly correlated ( $r = 0.63$ ).

### Hypotheses testing

We further conducted SEM on the basis of the CFA. Figure 3 presents the results depicting the standardized regression weights, significances, and coefficients of determination ( $R^2$ ). The SEM showed an acceptable to good model fit with  $\chi^2 = 1000.85$ ,  $df = 694$ ,  $p < 0.001$ ,  $\chi^2/df = 1.442$ , CFI = 0.937, TLI = 0.926, and RMSEA = 0.038.

As shown in Figure 2, SPS positively relates to expatriates' perceived stress ( $\beta = 0.36$ ,  $p = 0.009$ ), hence, supporting hypothesis 1. As predicted in hypothesis 2, there is a significant negative relation of SPS and bonding capital ( $\beta = -0.24$ ,  $p < 0.001$ ). Hypothesis 3 proposed a negative relation of bonding capital and stress, which holds true with  $\beta = -0.22$  ( $p = 0.001$ ). Contrary to hypothesis 4a, SPS and expatriates' turnover intention showed to be unrelated ( $\beta = 0.14$ , *ns.*). None of our control variables shows a significant relation to turnover intention, perceived stress, or bonding social capital. In consequence, hypothesis 4a also perceived that stress partially mediates the relation between SPS and turnover intention needs to be rejected, but we will examine the indirect effect to find out if stress is a full mediator. Concerning hypothesis 4c, we tested another SEM adding

a direct path from bonding capital on turnover intention. The direct effect was insignificant ( $\beta = 0.04$ ,  $p = 0.559$ ). Hence, we found evidence that stress might be a full mediator on this relation. However, to be sure about possible mediating effects, we conducted phantom model analyses.

Thereby, we found that there is a significant indirect effect of SPS on turnover intention via perceived stress ( $b = 0.17$ , 95% CI [0.038, 0.349]). Concluding, perceived stress fully mediates the relation between SPS and turnover intention. Further, there is a significant indirect effect of bonding capital on turnover intention via perceived stress ( $b = -0.14$ , 95% CI [-0.367, -0.025]) and, thus, we found evidence for hypothesis 4c stating that stress is a complete mediator. In addition, we checked a sequential mediation of SPS' effect on turnover intention via bonding capital, which affects perceived stress. The specific indirect effect is significant ( $b = 0.02$ , 95% CI [0.002, 0.047]), thus, pointing towards a sequential mediation. However, the indirect effect is very weak, being close to zero. Table 3 summarizes the results of the mediation analyses.

### Further results

In addition to including the expatriate typology in our sample as control variable, we also conducted a one-way ANOVA on the effects of expatriate type on perceived stress, bonding capital and turnover intention, in order to get more detailed results. There was a significant effect of expatriate type on perceived stress ( $F(1, 174) = 6.025$ ,  $p = 0.015$ ,  $\omega = 0.17$ ) and on turnover intention ( $F(1, 174) = 5.338$ ,  $p = 0.022$ ,  $\omega = 0.16$ ). That is, external expatriates, who change employers when going abroad, show higher means in perceived stress and turnover intention compared to organizational

**Table 2** Pearson inter-correlations, composite reliabilities (CR), means and standard deviations (SD)

|                                | Mean | SD   | CR   | 1       | 2      | 3      | 4      | 5     | 6       | 7              | 8              | 9     |
|--------------------------------|------|------|------|---------|--------|--------|--------|-------|---------|----------------|----------------|-------|
| 1 Gender <sup>a</sup>          | 0.59 | 0.49 |      |         |        |        |        |       |         |                |                |       |
| 2 Assignment duration          | 3.41 | 3.95 |      | -0.08   |        |        |        |       |         |                |                |       |
| 3 Years as an expatriate       | 5.93 | 6.49 |      | -0.04   | 0.62** |        |        |       |         |                |                |       |
| 4 Expatriate type <sup>b</sup> | 0.50 | 0.50 |      | 0.31**  | -0.14  | -0.16* |        |       |         |                |                |       |
| 5 Cultural distance            | 2.29 | 1.84 |      | 0.04    | -0.03  | 0.06   | -0.07  |       |         |                |                |       |
| 6 Neuroticism                  | 2.36 | 0.87 | 0.81 | -0.26** | -0.02  | -0.05  | -0.17* | -0.08 |         |                |                |       |
| 7 SPS <sup>c</sup>             | 2.82 | 1.02 | 0.86 | -0.23** | -0.06  | -0.09  | -0.10  | -0.02 | 0.63**  |                |                |       |
| 8 Perceived stress             | 0.76 | 0.36 | 0.79 | -0.24** | -0.01  | -0.05  | -0.18* | -0.09 | 0.72**  | <b>0.72**</b>  |                |       |
| 9 Bonding social capital       | 2.17 | 0.41 | 0.83 | -0.02   | 0.01   | -0.02  | -0.06  | 0.00  | -0.24** | <b>-0.29**</b> | <b>-0.41**</b> |       |
| 10 Turnover intention          | 2.97 | 1.30 | 0.89 | -0.15*  | 0.02   | 0.04   | -0.17* | -0.05 | 0.11*   | <b>0.16**</b>  | <b>0.28**</b>  | -0.05 |

Notes. \*  $p > 0.05$  (two-tailed), \*\*  $p < 0.01$  (two-tailed).  $N = 311$ . Due to missing values,  $n$  differs for correlations with the following variables: gender,  $n = 303$ ; years as an expatriate,  $n = 307$ ; expatriate type,  $n = 176$ ; cultural distance,  $n = 280$ . Bold significant inter-correlations of the relevant non-control variables.

<sup>a</sup> female =0, male =1;

<sup>b</sup> external expatriate =0, organizational expatriate =1;

<sup>c</sup> sensory processing sensitivity.

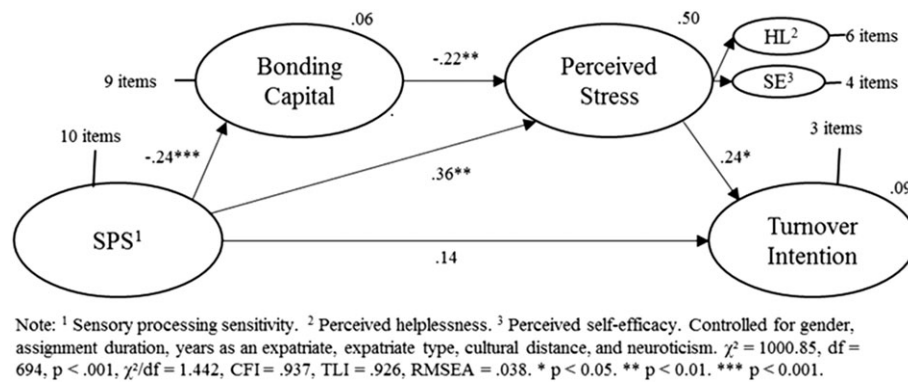


Figure 3 Tested structural equation model

expatriates. There was no significant difference regarding bonding capital ( $F(1, 174) = 0.734$ ,  $p = 0.393$ ).

Lastly, we examined a  $\chi^2$ -test of independence to examine relations between being an organizational or external expatriate and classes of SPS.<sup>3</sup> The relationship between these variables is significant ( $\chi^2(2) = 8.152$ ,  $p = 0.017$ ). This suggests that organizational and external expatriates show to be differently sensitive. Within the group of organizational expatriates, 42% show low SPS, 27.3% moderate SPS, and 30.7% high SPS, while out of the external expatriates, 33% are low, 47.7% are moderately, and 19.3% are highly sensitive.

## Discussion

The present study gives key insights into factors influencing expatriates' turnover intention. Based on COR theory (Hobfoll, 1989), our study introduces SPS into (international) management research and provides further insights into expatriates' resources. We found that perceived stress fully mediates the effects of sensory processing sensitivity (personal characteristic resource) and bonding social capital (condition resource) on expatriates' turnover intention. Moreover, latent profile analysis revealed that 26.4% of expatriates in our sample show high scores in SPS. In addition, there are significant differences in SPS levels between organizational and external expatriates, in that the group of organizational expatriates includes 30.7% highly sensitive expatriates, while only 19.3% of external expatriates are highly sensitive.

### Theoretical contributions

Our study contributes to scientific literature in several ways. First, this is the first paper examining the trait SPS

<sup>3</sup>Note that a comparison of the four expatriate types and classes of SPS did yield in by tendency significant results ( $\chi^2(6) = 11.310$ ,  $p = 0.079$ ). Too small observation numbers in the single groups might be the reason.

in the management context. In doing so, we transferred knowledge on this trait from the field of psychology into the management field, more specifically human resource management, expatriate management, and organizational behavior. Our results show that SPS, like many other personality traits, contains a 'dark' side during international assignments, in that it is related to higher levels of stress. Interestingly, our finding is in line with results of other studies in the non-cultural context, where similar relationships and stress levels were found ( $\beta = 0.40$ , Gerstenberg, 2012). This suggests that – after expatriates spent a certain amount of time abroad – exposure to this foreign environment might not moderate the relation between SPS and perceived stress any more. One reason is that highly sensitive persons show greater intuitiveness and need less effort to learn new information (Aron, 1996). Hence, sensitive expatriates might not feel more stressed abroad than at home after they could acclimatize to the new cultural environment. Further, highly sensitive persons are better at spotting and avoiding errors, are highly conscientious (Aron, 1996; Gerstenberg, 2012) and were shown to be less affected by cultural context as they process information more deeply (Aron *et al.*, 2010). Thus, SPS also has a 'bright' side and consequently can be a valuable resource that helps to reduce stress related to foreignness.

Second, we shed light on the ratio of highly sensitive expatriates. Other studies showed that 20% of people show high degrees of SPS (e.g., Acevedo *et al.*, 2014). Due to their higher self-reflectivity (Aron, 1996), highly sensitive individuals tend to be aware that they are prone to be stressed in new environments, for example, when relocating to a foreign country. Hence, it seems reasonable to assume that there are less than 20% highly sensitive expatriates (HSE), because they could avoid being confronted with additional stressors in a foreign environment to protect their resources. In contrast, we found a ratio of 30.7% of highly sensitive organizational expatriates and 19.3% highly sensitive external expatriates in our sample, underlining the trait's relevance

**Table 3** Specific effects, bootstrapped standard errors and 95% confidence intervals

| Effect being tested         | Specific effects, bootstrapped standard errors, and 95% confidence intervals |       |                       |        |
|-----------------------------|------------------------------------------------------------------------------|-------|-----------------------|--------|
|                             | Value                                                                        | SE    | Bias corrected 95% CI |        |
|                             |                                                                              |       | LL                    | UL     |
| SPS → Stress → TI           | 0.169                                                                        | 0.077 | 0.038                 | 0.349  |
| Bonding → Stress → TI       | -0.141                                                                       | 0.084 | -0.367                | -0.025 |
| SPS → Bonding → TI          | -0.015                                                                       | 0.026 | -0.072                | 0.033  |
| SPS → Bonding → Stress → TI | 0.015                                                                        | 0.010 | 0.002                 | 0.047  |

Note: SE = standard error, CI = confidence interval. 5000 bootstrap samples.  
SPS = sensory processing sensitivity, TI = turnover intention.

for expatriation research. This means that potential resource loss seems to be no reason for HSEs to avoid expatriation. Further, the high ratio of highly sensitive organizational expatriates implies that organizations, probably unconsciously, value their employees' SPS trait for international assignments. From an organization's perspective, next to high conscientiousness, which relates to higher expatriate performance (e.g., Bhatti *et al.*, 2014), also higher degrees in empathy might be a desirable trait for expatriates, as for instance cultural empathy plays a predictive role in expatriates' job satisfaction (Peltokorpi and Froese, 2014). As highly sensitive persons show both of these traits (Aron, 1996), they appear to be sent abroad more often by their organization.

Third, we found further empirical support for the COR theory and avoidance coping in terms of turnover intention. We could show that perceived stress fully mediates the effects of both, SPS and bonding social capital, on turnover intention. Thus, we illuminated the importance of stress in predicting turnover intention and transferred findings of other researchers (e.g., Podsakoff *et al.*, 2007) into the expatriation context. Further, we found support for bonding social capital being a valuable resource during international assignments. This result is in line with other studies in the domestic context (Chen *et al.*, 2015; Richards, 2016). Moreover, we showed that SPS relates negatively to bonding social capital. As highly sensitive persons show strong reactions to sensory stimuli, they attempt to control the volume of new environmental stimuli, including social contacts. In this vein, Ben-Avi and colleagues (2012) argue that, as opposed to the physical environment, the social environment is more difficult to control. This may explain why highly sensitives struggle initiating social relationships and building bonding social capital while abroad.

Lastly, we also gained new insights into differences between expatriate types following calls by other researchers (e.g., Alshahrani and Morley, 2015). We distinguished between intra and inter-organizational international mobility. Following COR theory, expatriates showing intra-organizational mobility tend to have access to more resources within their organization compared to expatriates joining a new organization abroad. Among

these resources are, for instance, higher organizational support and access to career networks, which both play an important role in predicting turnover intention of self-initiated expatriates (Cao *et al.*, 2014). Our findings illuminate that challenging assignments positively relate to turnover intentions (Preenen *et al.*, 2011), if expatriates miss adequate resources to handle the challenges.

#### Managerial implications

There are some managerial implications of our findings. By showing that expatriates' perceived stress positively relates to turnover intention, we hope to raise further awareness among international human resource managers on this issue. This is especially important, as stress has been shown to relate also to other outcomes, for example, performance (Bader and Berg, 2013) or job satisfaction (Spieß and Stroppa, 2010). Following COR theory, organizations need to provide their expatriates with (access to) valuable resources so that they can restrain perceived stress. These resources are transferable across different life domains, namely, surplus resources (e.g. time, energy) in the private life domain may be redeployed or invested for use in the work domain as needed to minimize losses and to increase organizational resources (Hobfoll, 2001). Conversely, resources depleted through the experience of strain in private life (Hobfoll and Shirom, 2000) are then unavailable for investment in the work domain. Thus, organizations should support their assignees in both areas.

For instance, it is important to support the expatriate in creating new high-quality social links to foster expatriates' bonding social capital. Within the expatriates' work context, team building measures or workplace programs can foster companionship, which is a COR resource (Hobfoll, 2001), and thereby reduce stress. Moreover, managers can furnish information about the foreign community and support the expatriates engaging in local activities (Mitchell *et al.*, 2001). As family accounts for bonding social capital, too, organizations should support the expatriate spouse in adjusting to the new environment to avoid that the spouse intends to move back to the home country. Both, formal and informal support programs can

do this (Teague, 2015). Further, as stress evokes avoidance coping strategies such as turnover intention and actual turnover, expatriates need support with and preparation in dealing with stress. Organization should offer resilience trainings (Griffith and West, 2013) to strengthen stress resistance of expatriates before expatriation. During the assignment, long-term coaching and mentoring programs might as well be helpful for expatriates, as people one can learn from also depict a valuable resource to achieve one's goals and thereby reduce stress (Hobfoll, 2001).

Further, regarding the trait SPS in the expatriation context, management needs to support HSE to reduce the feeling of being overwhelmed and to enable them to make use of the trait's 'bright' side. This can be done in a preparatory way and during the assignment. To prepare HSEs, the aim is to reduce the amount of novel stimuli they will encounter moving into a foreign environment. For example, techniques originating from acceptance and commitment therapy (ACT) which aim to help individuals to accept certain aspects of their lives as normal and reduce respective anxieties (Bakker and Moulding, 2012). However, it should be taken into account that, due to the necessity to cooperate with many different people at once, HSEs could be easily overwhelmed during the training. Taking this point into consideration, the most effective interventions for HSEs may be mentoring or (single) coaching (Skarics, 2007) at the company and, if possible, also during the assignments. Mentoring, especially in case it is provided by a (more) experienced expatriate, allows individual support, as it can easily take individual characteristics and problems into account. During the assignment, high-SPS expatriates need the possibility to withdraw from the stimuli they become overwhelmed (Aron, 2002). For instance, providing relaxation areas, single offices, or home office options could be appropriate solutions.

#### Limitations and future research

Like any study, ours has some limitations. A first one is the cross-sectional design of our study to collect the required data. There are at least two reasons calling for a longitudinal examination of the relations in our research model. First, Acevedo *et al.* (2014) theorize that HSPs make use of the deeper processing of new stimuli in the sense of high learning effects, which will be beneficial in similar future situations and, hence, reduce perceived stress. Thus, a longitudinal study could examine relations between SPS and cultural adjustment and expatriate effectiveness using latent growth modeling. Second, cross-sectional data only allows testing relations between variables, but no effects. However, drawing on COR theory, we grounded our research model and the supposed

causalities on a widely used, leading theory of stress (Chen *et al.*, 2015). Second, the shortened version of the SPS scale contained too few items of the facet Aesthetic Sensitivity to work with the factors of Smolewska *et al.* (2006) thus not allowing us to analyze the role of possible facets of SPS for turnover intention. Moreover, the version of the SPS scale used exhibited a comparably high correlation with neuroticism. Third, despite that we found a higher ratio of highly sensitive expatriates compared to the domestic context, this result lacks in generalizability, as our sample is not representative. Hence, future research should as well check for highly sensitive expatriates using latent profile analysis or other adequate procedures.

## Conclusion

Drawing on COR theory and avoidance coping strategy, we introduced the personality trait SPS into the field of expatriate management research and examined its relation to expatriates' turnover intention through stress and bonding social capital. We found that more than one fourth of the expatriate respondents show high scores in SPS, whereas only one fifth of the general population is expected to be highly sensitive. It would seem that highly sensitive expatriates' innate preference to pay more attention to stimuli in all cultural contexts and to process these stimuli more thoroughly (Aron and Aron, 1997) makes their perceptual judgments relatively less influenced by the cultural contexts to which they are exposed (Aron *et al.*, 2010). This 'bright' side of their trait might explain their overrepresentation within the expatriate population. However, on its 'dark' side SPS shows, on average, to be positively related to stress. We found that perceived stress fully mediates the relation between both, SPS and bonding social capital, and turnover intention. Thus, in order to allow employers to fully profit from the advantages that SPS brings in cultural contexts and to reduce turnover, it is core to invest in stress reducing practices.

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