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How many things do you (like to) do at once? The relationship between need for closure and multitasking preference and behavior

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ABSTRACT

Nowadays, multitasking has become an integral part of everyday life. However, not everyone enjoys multitasking and there are some who prefer working on tasks sequentially. In this paper, we argue that need for cognitive closure (NFC), a motivational tendency to avoid ambiguity and uncertainty via a rigid processing style, is a variable related to lower willingness to engage in multitasking. Across three samples, we found that NFC was negatively related to multitasking preference (Study 1). In Study 2, we found that NFC negatively predicted self-reported multitasking behavior. Study 3 additionally showed that NFC negatively predicted multitasking behavior operationalized as the number of switches between tasks in a multiple media task. Implications for peoples' well-being and performance are discussed.

1. Introduction

Researchers argue that the prevalence of multitasking has reached new heights and people constantly multitask at home, at school, and at work (e.g., Bühner, König, Pick, & Krumm, 2006; Cain & Mitroff, 2011). However, individuals differ in their willingness to engage in multitasking behavior. Some prefer to perform multiple tasks at the same time, whereas others would rather finish one task before moving to another (Bluedorn, Kaufman, & Lane, 1992; Kaufman, Lane, & Lindquist, 1991; Poposki & Oswald, 2010). So, not everyone enjoys multitasking and there are some who find it rather undesirable and stressful (Poposki & Oswald, 2010). This seems especially important given that nowadays multitasking has become an integral part of nearly every job and employees are increasingly asked to juggle tasks, deal with several simultaneous demands, and divide their attention (Bühner et al., 2006). Such work environments pose a particular challenge for those who prefer monotasking over multitasking. Previous studies show that a misfit between a person's preference for multitasking and multitasking requirements is related to lower job satisfaction, lower self-efficacy and higher psychological strain (Hecht & Allen, 2005).

In this paper, we argue that a variable that is related to lower preference for multitasking, or switching back and forth between several tasks in the same time period, is the need for cognitive closure (NFC, Kruglanski, 1990), a basic motivational tendency to avoid and reduce ambiguity and uncertainty (Kruglanski, 1990). People who are high on NFC desire order and predictability in their lives, prefer structured environments, are intolerant of ambiguity, exhibit rigidity of thought and a greater preference for conformity (Kruglanski, 2004). They also have more focused and selective attention compared to their low-NFC counterparts (Kossowska, 2007a, b; Szumowska & Kossowska, 2017b). In organizational settings, high-NFC individuals have greater difficulty coping with change (Kruglanski, Pierro, Higgins, & Capozza, 2007) and exhibit lesser creativity (Chirumbolo, Livi, Mannetti, Pierro, & Kruglanski, 2004). Therefore, we expect high NFC levels to be associated with a lower multitasking preference and lower willingness to engage in multitasking, especially when there are no external pressures to do so. The latter seems particularly compelling given that high NFC is also related to a greater motivation to comply with norms, rules, and situational and organizational pressures (Chiu, Morris, Hong, & Menon, 2000; Fu et al., 2007; Jia, Hirt, & Evans, 2014). So, high-NFC individuals might be more motivated to multitask when it is demanded of them. In fact, a study by Szumowska, Kossowska, and Roets (2018) showed that when multitasking was a rule and participants were explicitly asked to do so, higher NFC individuals multitasked to a greater extent. Particularly, they invested more effort to comply with the given situational rules. Other studies, however, showed that due to more restricted cognitive resources and the more focused attention of high-NFC individuals, multitasking might be more demanding for them than for low-NFC individuals (Szumowska & Kossowska, 2017b; see also Kossowska, 2007a, b). So, even though high-NFC individuals might at times outperform their low-NFC counterparts in multitasking (Szumowska & Kossowska, 2017a), it might be more costly to them (in

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terms of well-being, job satisfaction, and stress levels) in the long run if they in fact *do not like* multitasking; however, to the best of our knowledge, this has not yet been examined.

The aim of this paper is to fill this gap and test the relationship between NFC and both multitasking preference and self-initiated multitasking behavior. We thus differentiate between different aspects of multitasking: multitasking performance (effectiveness of performing several tasks at the same time), multitasking preference (the extent to which individuals like performing several tasks, rather than a single task, at the same time and perceive multitasking as enjoyable and rewarding rather than stressful, Poposki & Oswald, 2010) and multitasking behavior (adopting a multitasking strategy, or engaging in multitasking). This differentiation is in line with other researchers' recommendations and the results of previous studies (e.g., König & Waller, 2010; Ophir, Nass, & Wagner, 2009). We also argue it is necessary to better understand the relationship between NFC and multitasking. Since there are initial studies on the relationship between NFC and multitasking performance (in which NFC was related to poorer, equal, or enhanced performance depending on the situation, Szumowska & Kossowska, 2016, 2017a, b), in this paper we look into the relationship between NFC and multitasking preference and behavior.

We believe that the results of the presented studies not only have noteworthy consequences for individuals' functioning in organizational settings, but also shed some light on how individuals select and organize their activities in everyday life depending on their NFC levels (which we cannot infer from previous studies wherein participants were instructed to multitask). According to the fit theory (Kristof-Brown, Zimmerman, & John-son, 2005), individuals are most attracted to and function best within work environments matching their preferences and needs. Thus, knowing time use preferences related to NFC can help identify optimal work environments for high-NFC individuals. It can also help in understanding the challenges they meet in today's information rich, multitasking-promoting, and rapidly changing work settings (Appelbaum, Marchionni, & Fernandez, 2008; Bühner et al., 2006). In such environments, a misfit between preferred and required use of time might be more likely for high (than low) NFC individuals, which, given their higher desire to adjust to exiting (work) norms (Kruglanski, Pierro, Mannetti, & De Grada, 2006), makes the situation of high-NFC individuals within contemporary organizations particularly interesting to study.

2. Multitasking preference, behavior, and performance

Multitasking has commonly been defined as carrying out two or more tasks at the same time (e.g., Bühner et al., 2006; Ishizaka, Marshall, & Conte, 2001; Rubinstein, Meyer, & Evans, 2001) or as a means to accomplish multiple task goals in the same time period by engaging in frequent switches between tasks (Delbridge, 2000). Some researchers differentiate between concurrent and sequential multitasking: situations wherein two or more tasks are carried out at the same time, and situations wherein one must choose to do one task or the other and switch between the unfinished tasks at hand (e.g., Adler & Benbunan-Fich, 2012; Wickens, Gutzwiller, & Santamaria, 2015). Other researchers, however, argue that simultaneous task performance is not possible, and concurrency is only apparent: what in fact happens in such situations is very rapid switches between tasks (Oswald, Hambrick, Jones, & Ghumman, 2007). In line with that, Salvucci and Taatgen (2011) propose that multitasking should be represented on a time-scale continuum with very frequent (e.g., every few seconds) switches on one end of the continuum and much less frequent (e.g., every half an hour) switches on the other. Therefore, in this paper we treat both simultaneous task performance and switching between tasks as forms of multitasking and use the number of task switches as an indicator of multitasking behavior. We also differentiate between multitasking behavior, preference, and performance.

As for the first two, multitasking behavior and preference, they were initially considered together under the term of polychronicity (see König & Waller, 2010, for a review). Originally proposed by Hall (1959), this term referred to the degree to which cultures *do* several things at the same time (as opposed to doing one thing at a time) and, as added later by Hall (see Bluedorn, 1998), *value doing* this. Later, however, the attitudinal aspect was emphasized. Bluedorn, Kalliath, Strube, and Martin (1999) defined polychronicity as the extent to which people *prefer* to be engaged in two or more tasks simultaneously and *believe* their preference is the best way to do things. In line with this, König and Waller (2010) postulated that the term polychronicity should only be used to describe the preference for doing several things at the same time, whereas the behavioral aspect of polychronicity should be referred to as multitasking. We therefore treat the two separately, especially as there is no necessary link between multitasking preference and behavior (one might feel pressured by the environment to do several things at the same time without actually liking it, König & Waller, 2010). Also, there is no necessary link between multitasking preference and performance; some studies found a positive link, some negative, and some no relationship between the two variables (see König & Waller, 2010, for a review).

It is also important to separately examine multitasking behavior (i.e., engaging in multitasking) and multitasking performance (i.e., effectiveness with which one performs multiple tasks). A seminal study by Ophir et al. (2009) showed that people who frequently engage in multitasking in fact perform worse cognitively at the main task at hand when switching back and forth between tasks (compared to individuals who multitask less frequently). The authors identified heavy and light media multitaskers (people high and low on multitasking behavior, respectively) and presented both groups with a set of cognitive ability tasks. The results showed that heavy media multitaskers performed worse on a test of task-switching ability and were more susceptible to interference from irrelevant environmental stimuli and from irrelevant representations in memory. This led to the surprising conclusion that those who engage in multitasking behavior to the greatest extent are not those who are the most capable of multitasking effectively. A similar effect was found by Sanbonmatsu, Strayer, Medeiros-Ward, and Watson (2013) who showed that multitasking behavior (which they refer to as multitasking activity), measured by the Media Multitasking Inventory and self-reported cell phone usage while driving, and multitasking performance (which they refer to as multitasking ability), measured with the Operation Span task, are negatively correlated. These two aspects of multitasking were also predicted by different variables.

This all suggests that multitasking preference, behavior and performance should be treated separately as they are not necessarily positively correlated (König & Waller, 2010) and are differentially related to other variables (Sanbonmatsu et al., 2013). In the current paper, we examine their relationship with NFC. And since the relationship between NFC and multitasking performance has been initially described elsewhere (Szumowska & Kossowska, 2016, 2017a, b), we here focus on the relations between NFC and multitasking preference and behavior.

3. Need for closure and multitasking

Need for closure was originally defined as the desire for “an answer on a given topic, any answer … compared to confusion and ambiguity” (Kruglanski, 1990, p. 337). Individuals high in this need are characterized by a preference for order and predictability, feel discomfort with ambiguity, and experience situations lacking closure as aversive. They are also more closed-minded and have a higher need for decisiveness (Kruglanski, 2004). On the other hand, individuals low on NFC are open to prolonging uncertainty, engage in a more deliberative decision-making process and have more flexibility of thought.

Typical effects of NFC, such as simplification, structuring and reduction of information, as well as rigidity in processing, have been