

THE INFLUENCE OF DYSFUNCTIONAL COGNITIONS ON JOB-RELATED  
EXPERIENCES AND BEHAVIOUR – A COGNITIVE-BEHAVIOURAL PERSPECTIVE

Martin SAUERLAND<sup>a</sup>, Helen M. SOYEAUX<sup>a</sup> & Jarek KRAJEWSKI<sup>b</sup>

<sup>a</sup>Correspondence address:

*University of Koblenz-Landau*

*Economic Psychology*

*Fortstraße 7*

*D-76829 Landau*

*Germany*

Email: sauerland@uni-landau.de

Phone: +49 6341 280 31237

Fax: +49 6341 280 31483

<sup>b</sup>*University of Wuppertal*

*Experimental Business Psychology*

*Schumpeter School of Business and Economics*

*Gaußstraße 20*

*D-42097 Wuppertal*

*Germany*

Email: krajewsk@uni-wuppertal.de

Phone: +49 202 439 2287

**Biographical notes:**

Martin Sauerland received his diploma in psychology in 2002 and his doctoral degree in 2006 from University of Regensburg in Germany. He is a work motivation researcher at the Department of Economic Psychology at the University of Koblenz-Landau. His current research focuses on the role of dysfunctional cognitions on work motivation and performance with implications for trainings in personnel development. He (co-)authored many publications in peer reviewed books and journals in the field of economic psychology.

Helen Soyeaux graduated in psychology at the University of Koblenz-Landau in 2013 and was a research assistant at the Department of Economic Psychology. Besides, she has got much experience in therapeutic attendance of patients with diverse mental and behavioural disorders. She is doing her qualification in behaviour therapy.

Prof. Dr. Jarek Krajewski received his diploma in 2004 and his doctoral degree for his study on Acoustic Sleepiness Detection in 2008, both in psychology and signal processing from University of Wuppertal and RWTH Aachen in Germany. He is vice director of the Center of Interdisciplinary Speech Science at the University of Wuppertal and Full Professor in Experimental Industrial Psychology since 2013 at the University of Applied Sciences Rheinische Fachhochschule Cologne. He is member of the ISCA, Human Factors and Ergonomics Society, German Society of Psychology, and (co-)authored more than 50 publications in peer reviewed books, journals, and conference proceedings in the field of affective computing, experimental industrial psychology.

**Abstract:** In the present article we assume that people with a high degree of dysfunctional cognition do not fulfil their potential. After introductory statements regarding the concept of job-related dysfunctional cognition, we show how dysfunctional cognition reduces employees' willingness to perform. Following this, we investigate the role that these mechanisms play in central, direct or indirect performance-relevant topics of economic psychology. We argue that dysfunctional cognition negatively affect phenomena such as: (a) *performance*, (b) *stress & burnout*, (c) *absenteeism & presenteeism*, (d) *resistance to change* and (e) *other areas*. These topics are analyzed from a cognitive-behavioral perspective. Finally, cognitive-behavioral training to reduce dysfunctional cognition is proposed. The paper contributes to theory due to its new and enlightening cognitive-behavioral perspective on the mentioned phenomena and practice as it describes how to cope with dysfunctional patterns of thinking and, thus, promote human resource development.

**Keywords:** dysfunctional cognition, irrational beliefs, performance, stress, burnout, absenteeism, presenteeism, resistance to change, cognitive-behavioral training

## 1. What are dysfunctional job-cognitions?

Cognition will be denoted as dysfunctional if it prevents a person from efficiently achieving goals or optimally satisfying his or her needs. Such thoughts can restrict a person's behavioral repertoire and inhibit actions in general.

A survey of employees and leaders of various industries, conducted by the authors, revealed the following examples of dysfunctional cognition: "I have to manage that on my own!", "Certainly, that won't work!", "I'm no good at Math!", "If only I didn't have to do this!", "I have to offer a solution, otherwise everybody will be disappointed in me!", "My way or the highway!", "You can't do anything in this case!", "If only I had done this another way at the time!", "You can only be successful if you know the right people!", "Today nothing worked!", "If only I had chosen a different job!", "Everyone here is better than me!"

Such examples can be categorized in terms of specific dysfunctional patterns of thought (cp. Sauerland & Müller, 2012, following Beck, 1967, 1991, 1995, 2005 and Ellis, 1962, 1991, 2007): *Perfectionistic thinking*, *catastrophizing (maximizing)*, *you-have-to/you-should imperatives*, *counterfactual thinking*, *overgeneralizations*, *exaggerations*, *black-and-white thinking (dichotomous thinking)*, *selective perception*, *unverified projections*, *reductionism*, *mental rumination* and *mind reading*.

*Perfectionistic thinking.* Individuals are often convinced that they have to complete a task flawlessly and that there is no room for error. Given the fact that perfection often is unrealistic and rarely possible, this type of thinking is often demotivating as it may lead to frustration, disappointment and dissatisfaction. In addition, perfectionistic thinking may contribute to inefficiency, as the opportunities to refine and perfect a given task are persistently present. That is, there is always room for improvement and thus a task is never complete.

*Catastrophizing.* Catastrophic thinking occurs when an individual imagines the worst possible consequences of failure. For example, "If I don't manage it, it will be a disaster!" Such beliefs are extremely demotivating, and may cause people to avoid starting a task altogether. Individuals who engage in catastrophic thinking may nonetheless devote themselves to a task, but their performance will likely be strongly inhibited by their fear of failure. Specifically, their psychological resources are channeled to regulate emotions of fear rather than solving the problem.

*You-have-to/you-should imperatives.* An instance of the so-called you-have-to imperative is: "I have to manage my studies, otherwise I won't get a good job!" From the standpoint of motivational psychology such a drive – though comprehensible – may be counter-productive as the individual puts undue pressure on him or herself, and as a result may lose pleasure engaging in the given activity.

*Counterfactual thinking.* Counterfactual thinking is common. An example of this cognitive pattern may comprise thoughts such as "everything could be much easier than it is!" or "if only I had chosen a different job!" From the standpoint of motivational psychology, counterfactual thinking is often dysfunctional, as it is irrational and demoralizing to dwell on "what ifs" and "what could have been", or other thoughts of unrealistic reveries and missed opportunities. Persisting in "circles of sorrow" where the individual's discontent with his or her personal status

quo leads to taking mental refuge in a more pleasant make-believe world, can keep the person from actively pursuing solutions and achieving realistic goals.

*Overgeneralizations.* An overgeneralization occurs if, for instance, an employee receives a bad assessment concerning a concrete project and generalizes this criticism to broader and perhaps unrelated aspects of his or her professional role. Such thought processes may lead to the employee committing him- or herself less and less to the various areas of life that are affected by the generalization, for instance the job as a whole.

*Exaggerations.* Exaggerations are related to overgeneralizations. However, they exclusively refer to the assessment of specific events. A typical example of exaggeration could be that a person finds a spelling mistake on one of the slides of his presentation, and on the basis of this single error believes that the whole presentation is a failure.

*Black-and-white thinking.* The conviction that there is only a single right way to achieve a goal, denotes a so-called “black-and-white” thought pattern. This train of thought sabotages mental flexibility and undermines discovery of possible solutions. This also applies to “all-or-nothing-”, an “either-or-” or a “my way or the highway-”-type thought patterns. To preserve self-motivation and increase productivity, it is likely preferable to refrain from such simplistic thought patterns, and thus avoid the risk of overlooking better solutions to a problem. For example, if thoughts are characterized by “as-well-as“ reasoning, this may facilitate creativity and enable a person to pursue several possible solutions, change perspectives or discover satisfactory compromises.

*Selective perception.* On ‘bad days’ people are often convinced that “today everything went wrong!” In this case, people selectively focus on the things that went wrong, while ignoring events that went well.

*Unverified projections.* Unverified projections refer the belief that a novel task is impossible. That is, despite having no experience in the given matter, it is nonetheless perceived as too difficult to complete. These convictions are often represented by thoughts such as, “I can’t do anything like this!” or “You can’t do anything in this case!” For the most part, unverified projections inhibit or prevent people from attempting the given task.

*Reductionism.* Reductionism is another form of restrictive thinking. For instance, the idea that a successful career depends solely on having the right connections, may demotivate a person who realises that he or she has none or few such connections. That is, disproportionate importance is placed on a single factor (in this example, professional relationships) when in reality many other variables may be equally or more influential.

*Mental rumination.* Mental rumination refers to the maladaptive and incessant focus on the potential (and often unlikely) pitfalls – rather than benefits – of completing a given task. This thought-pattern may reflect excessive caution and discourage action altogether.

*Mind Reading.* People may misinterpret the intentions, thoughts or wishes of others in a negative way. For example, a person may perceive an unintentional snub by a colleague as deliberate and mistakenly think that “he didn’t say ‘hello’ to me today on purpose!” or “she ignored me and must not like me!” Mind reading may unnecessarily complicate social relationships and result in demoralized, tense, and avoidant interpersonal constellations.

Dysfunctional cognitions can arise from personal experiences (e.g. failure), socialization processes (e.g. internalized achievement imperatives), individual motives (e.g. fear of rejection), or social comparison (e.g. “my neighbor is wealthier than me!”) (cp. e.g. Beck, Rush, Shaw & Emery, 1999). Such experiences are often generalized to other areas of life, projected to the future, or interpreted with bias or abstracted in relation to certain aspects. This may serve as a protective function for the individual – for example by helping him or her avoid another failure, or explore (rather than ignore) the possibilities for effective action. However, more often than not, the thought patterns that may result from such experiences transform into dysfunctional cognitions, irrational beliefs and unquestioned dogmas (e.g. “I’m inherently not good at Math!”), that can shape perception and behavior. As a result, aspirations may become more modest, and performance may be inhibited or avoided altogether, ultimately constraining rather than promoting individual well-being, goal attainment and overall satisfaction. Often they are irrational because they are logically inconsistent and empirically unverified – they are based on systematic errors in reasoning and heuristic conclusions which are prone to errors (Ruscio, 2010), they are extreme, rigid, impractical, absolutist and unrealistic (Choudhury, 2013).

## 2. The effects of dysfunctional cognitions on central topics of economic psychology

### 2.1 Performance

Performance is a product of the interplay between ability, motivation and situation (cp. Campbell, McCloy, Oppler & Sager, 1993):

$$\bullet \text{ Performance} = \text{Ability} \times \text{Motivation} \times \text{Situation}$$

**Situation** refers to the facilitative or inhibitory conditions under which a given performance occurs. For instance, working in a supportive environment with access to necessary job-related tools (e.g. company car, computer, etc.) is likely to boost performance. On the other hand, a distracting workspace with outdated facilities will probably have the opposite effect. The term **ability** refers to a) the extent to which the individual is well-suited for the job, and b) the relevant experience. It will be easier for an attractive, extraverted and intelligent person to close deals with customers than for a physically unattractive, introverted and less intelligent person. Similarly, an employee who has no experience in negotiation, *ceteris paribus* will complete fewer contracts than an employee who has extensive such experience. Performance also depends on **motivation**. Empirical findings indicate that companies are confronted with demotivated employees and leaders, that working potential often is not fulfilled, and that many work to rule (this affects 68% of employees, Gallup, 2010). Apart from that, employee well-being may be negatively affected by demotivation. Dysfunctional cognition is often a central cause of demotivation, and one that maintains and accelerates this state of mind.

The impact of dysfunctional cognitions on performance reduction is due to the facts that this way of thinking can a) lead to depression and inactivity, b) elicit intrusive thoughts and anxieties that deplete cognitive resources, c) reduce the motivation to act by negative expectations, and d) evoke negative self-fulfilling prophecies. That is, a creative and effective performance is not likely to result from thoughts such as “Maybe the others think badly of me!”, “I can’t do Math!”, “In this case you couldn’t do anything!”, “If something goes wrong it will be a catastrophe!”

With the above discussion, it is conceptually hypothesized that dysfunctional cognitions may be related to performance. An appropriate empirical reference could be provided by the authors

of this article: In a Stroop-task, participants with higher degrees of dysfunctional cognition performed significantly worse than participants with lower degrees of dysfunctional cognition. A color-word-interference test (Bäumler, 1985) was used for nonspecific measurement of performance. The performance of the  $N = 45$  participants was systematically associated with the extent of their dysfunctional cognition ( $r = -.42$ ;  $p < .01$ ) measured on a scale of dysfunctional cognition (Hautzinger, Joormann & Keller, 2005) one week before. The influence of dysfunctional cognitions on procrastination behavior (Beswick, Rothblum & Mann, 1988) and other performance related variables has already been shown by other authors (e.g. Frost, Marten, Lahart & Rosenblate, 1990) (an overview is given by Szentagotai & Jones, 2010).

There is a solid evidence base indicating that personality factors are the best predictors of inter-individual differences in performance (Ghiselli, 1966). In this context, the concept of self-efficacy (Bandura, 1982) plays a decisive role. That is, people with higher levels of self-efficacy perform better than people with lower levels (Gist & Mitchell, 1992). The concept of self-efficacy can be defined as the subjective ability to reach important goals by one's own competence (Bandura, 1980). This lends further support to the idea that dysfunctional cognitions are highly connected to performance, as self-efficacy can be understood as a cognitive end-product of (dys-)functional thought patterns.

The impact of dysfunctional cognitions on performance in school, college, assessment centers and in later professional life, is easy to imagine. (Dys-)functional cognitions may represent some of the best predictors of job-performance. Indeed, support for this idea can be found in work by Srivastava and Nair (2011).

Dörner and colleagues (1989) instructed participants to run a computer simulated chocolate factory (Hoyer, 2006). Participants who managed the company with success demonstrated less dysfunctional cognition than participants who were not successful managers. Further, successful vs. unsuccessful performers differed in terms of the type of dysfunctional cognitions they engaged in. For example, unsuccessful participants often believed that there was only one pivotal variable for economic success (reductionist thinking), and as a result overlooked the complex interaction between the variety of factors that *actually* determined success. Because of this, they tried to influence the perceived key variable (blind activism) which resulted in negative side-effects and long-term consequences.

Stress reduces individual performance and company productivity (see Landy & Conte, 2013). In the following chapter, the effects of dysfunctional cognitions on the development of stress and burnout will be examined.

## 2.2 Stress and Burnout

There is considerable evidence that dysfunctional cognitions cause depression (Bates, Thompson & Flanagan, 1999; Just & Alloy, 1997; Nolen-Hoeksema, 1995; Solomon, Arnow, Gotlib & Wind, 2003; Solomon, Haaga, Brody, Kirk & Friedman, 1998; Strickland, Hale & Anderson, 1975). Both symptoms (e.g. exhaustion, reduced efficiency) and risk factors for depression (e.g. high workload, lack of control) are comparable to those of burnout (cp. Maslach & Jackson, 1984; Maslach, Schaufeli & Leiter, 2001). Thus, it follows naturally that dysfunctional cognition may also be antecedent to stress burnout. Some empirical findings support this hypothesis (Balevre, 2001). In this context, the maladaptive effects of perfectionist thinking, reductionism, irrational convictions, like "I always have to have everything under control!", and unverified projections, are relevant.

Intuitively, dysfunctional cognitions are related to experiences of stress. That is, people deal with stress in different ways (Lazarus, 1991; Lazarus & Folkman, 1984). For example, some people may not be able to concentrate on a task in a noisy room, whereas others may not be as affected by the noise. In addition to such individual differences there is also personal variation in sensitivity to stress. On some days, a given task can cause the individual to experience intense stress, while on other days the very same task may be perceived as stimulating and challenging. The fluctuation in individual and personal reactions to stress may be explained by the way in which the potential stressor is interpreted. That is, functional and solution-based thought patterns are probably more likely to protect against stress and anxiety than dysfunctional and inhibitive cognitive interpretations (Conrad & Matthews, 2008; Eriksen, Murison, Pensgaard & Ursin, 2005; Ursin & Eriksen, 2004; Tan, 2004). Indeed, dysfunctional cognitive appraisals of a task (e.g. “I have to manage things in my life on my own!”) may be aptly labelled as “stress-cognitions”.

It seems pertinent to adapt the cognitive restructuring method that turned out to be effective in the clinical context (Freeman & Oster, 1999; Hollon & Beck, 1994; Shaw & Segal, 1999; Terjesen, DiGiuseppe & Gruner, 2000) to a non-pathological setting. This cognitive-behavioural method could be utilized to cope with occupational stress and the prevention of burnout (Ziegler & Leslie, 2003; see Chapter 3).

Considering the increasing prevalence of stress-related diseases (e.g. burnout from 2004 to 2009 about 17%; Badura, Ducki, Schröder, Klose & Macco, 2011) as well as the related costs of employee absenteeism, urgent demand for action is needed. The next chapter deals with the causes of missed workdays.

### *2.3 Absenteeism and Presenteeism*

The majority of missed workdays is caused by illness, with mental health issues in particular increasing dramatically over the past decade (more than 50% increase in middle Europe since 2001). All other illness (e.g. cardiac disease, respiratory tract infections, digestion or musculoskeletal system problems) have decreased slightly (Badura et al., 2011). The role of dysfunctional cognitions in the development of burnout has already been described. However, absenteeism also results from listlessness – that is, skipping work (Nicholson & Johns, 1985). Indeed, it is estimated that half of all absent days can be traced back to listlessness. The consequent costs for organizations are considerable (cp. Sagie, Birati & Tziner, 2002).

Both illness- and listlessness-related absenteeism can be caused by dysfunctional cognitions. For example, if the individual is convinced that he or she is being exploited by superiors, treated unfairly, or more generally not being given the opportunity to achieve and perform, this may compel the individual to skip work (Adams, 1965; Liebig & Schupp, 2008).

Dysfunctional cognitions can also take the following shape: “I will not tolerate any physical aches or pains!”, “You should take care of yourself!”, “Work makes me sick!”, “Muscle pain is absolutely dramatic!” or “Life shouldn’t be too strenuous!” In other words, minimal or even normal health effects of work may be exaggerated and used to excuse absenteeism (Ehde & Jensen, 2010; Keefe, Rumble, Scipio, Giordano & Perri, 2004; Pavlin, Sullivan, Freund, & Roesen, 2005; Silverglade, Tosi, Wise & D’Costa, 1994; see also the nocebo-effect, de la Cruz, Hui, Parsons & Bruera, 2010). Dysfunctional cognition can even be directly associated with a weak immune system and a high vulnerability to disease (see Papageorgiou et al., 2006).

Absent days can also emerge from presenteeism. Presenteeism denotes the urge to go to work in spite of disease or feeling sick (Aronsson, Gustafsson & Dallner, 2000). This behaviour can have unfavorable consequences for the person concerned and the organization as a whole. For example, diseases may be infectious and spread to colleagues, affecting their ability to work. Further, an illness left untreated may become worse and last longer (Bergström, Bodin, Hagberg, Aronson & Josephson, 2009). Thus, excessive presenteeism is an irrational behavior as long-term consequences and side effects are ignored. Such behavior is rooted in the belief that: “I always have to be ready to work!”, “Everybody will be disappointed in me if I don’t go!”, “Disease is a sign of weakness!”, “I will be fired if I stay away from work!” (cp. Caverley, Cunningham & MacGregor, 2007).

Dysfunctional cognition therefore appears to be a central antecedent to missed workdays due to absenteeism and presenteeism. Absent days can also be caused by irrational beliefs that are provoked by change-projects – this will be discussed below.

#### *2.4. Resistance to change*

Globalization, growing demand, increased competition, and rapid technological progress, all necessitates permanent change in organizations. However, psychological research shows that employees often have negative attitudes towards change-processes. They do not participate in or even try to boycott such projects of organizational development (Greenberg, 2002; Fugate, Kinicki & Prussia, 2008; Rafferty & Griffin, 2006; van Dam, 2005). This phenomenon is known as ‘resistance to change’ (e.g. Oreg, 2005). ‘Resistance to change’ also affects productivity. For example, absent days and the consumption of alcohol at work significantly rise (Miller & Yeager, 1993).

The reasons for ‘resistance to change’ are multi-layered (van Dam, 2005) and may include, a) fear of the unknown, b) worry of becoming replaceable or unemployed, c) regret associated with core competencies that may no longer be needed, d) anxiety about getting along with new colleagues, e) missing out on incentives or benefits, or f) lack of trust in management. This list reveals that dysfunctional cognitions may also impact on this area. Certainly, they are catalysts of refusal (cp. Herold, Fedor & Caldwell, 2007; Miller & Yeager, 1993; Wanberg & Banas, 2000). For example, persons are of the conviction that a work task has to be carried out in a certain way, they assume that they will not be liked by new colleagues, worst-case scenarios like a possible loss of power are imagined or personal experiences of failed changes are overgeneralized (cp. Cunningham, Woodward, Shannon, MacIntosh, Lendrum, Rosenbloom et al., 2002). Thus, resistance to change may be influenced by dysfunctional cognitions such as unverified projections, selective perceptions, exaggeration, overgeneralization, catastrophizing, black-and-white thinking as well as counterfactual thinking.

Resistance to change may prevent rash restructuring or blind activism (Piderit, 2000). Thus, the underlying convictions may partly be justified, however, most of them can be classified as dysfunctional, as employees in general profit from projects of organizational development (Martin, Jones & Callan, 2005). In light of this, Armenakis, Harris and Field (1999) suggest measures to positively influence employees’ cognitions in the course of change projects.

#### *2.5 Other areas*

It would appear that in numerous areas of life people are unnecessarily inhibited, unhappy, and/or ill, and as a result underperform in various activities. The reason for this unfulfilled potential may – at least in part – be related to dysfunctional cognitions. In several areas of economic psychology, the influence of dysfunctional cognitions has not been explored yet. For example, effective teamwork may be compromised if members display ‘lone fighter’ convictions, unreasonable demands of self-fulfillment, competitiveness or subscribe to dogmas dictating individualization and complete independence. Dysfunctional cognitions are also central in coping with demography-related challenges. For example, the older part of the working population may excuse listlessness with reasoning characterized by statements such as “I’ve done enough!”, “I can’t do such things anymore!”, “I can’t keep up with it any longer!”, or “this should be done by the younger workers!” Finally, the irrational thought patterns of leaders are also relevant in this context. Decision-making processes of managers are biased by individual-heuristic beliefs (Kahneman, 2011). Irrational thinking of an individual can lead to irrational decisions that may have serious consequences for the organization as a whole.

Organizations, therefore, should take measures to diagnose and reduce employees’ dysfunctional cognitions. Integrating cognitive-behavioral coaching in the workplace, for instance, may promote complex and sophisticated thinking, expand and enhance behavior, sharpen the perception of own competencies, raise the tolerance for workload and emotional tension and, thus, increase resilience (Sherin & Caiger, 2004). Under specific circumstances (e.g. change projects) situation-specific and instant cognitive-behavioral coaching may be advantageous. In the next chapter the goal, procedure, structure and possible contents of such training programs are outlined.

### **3. The reduction of dysfunctional cognitions**

How can dysfunctional cognitions be reduced? How do interventions in the form of training programs need to be conceptualized in order to be effective? Is it possible to achieve the desired effects with a single training session, or are comprehensive training programs required to be integrated into the workplace and operated on an ongoing basis? Considering the fact that irrational beliefs typically are acquired over many years and occur at a subconscious level where change is more difficult to effect, the latter may be the case. At the same time, it seems plausible that certain insights into behavior and reasoning can have immediate impact. Is it possible to trigger such insights by cognitive-behavioral training and thus reduce dysfunctional cognitions?

Cognitive-behavioral techniques targeting stress have certainly been found to have stress-reducing effects (Choudhury, 2013; Kushnir & Malkinson, 1993; Trexler & Karst, 1972). Similarly, cognitive-behavioral procedures in health-management training have proven to be useful (Keogh, Bond & Flaxman, 2005).

The authors of this article have developed a cognitive-behavioral training concept aimed at improving employees’ motivation and performance. So far,  $N = 42$  participants positively evaluated the training, referring to its utility, goal attainment, adaptability. Further, the training proved to be more effective than standard motivational training. The primary goal of the training program was to teach, develop, and apply strategies to reduce demotivating and performance-inhibiting cognitive schemes. Another goal was to develop and apply strategies to facilitate motivating and performance-enhancing cognitions. In order to achieve this, demotivating situations were identified and collected on a flipchart, and the negative reactions to these situations were noted. Subsequently, dysfunctional cognitions that connected the demotivating situations with the negative behavioral reactions were identified. The various

dysfunctional cognitions were then categorized into the dysfunctional cognition schemes mentioned above (e.g. black-and-white thinking). In the next step, several techniques were used to question the dysfunctional cognitions. For instance, by means of a “crossfire” role play, participants disputed their cognitions in the form of a speech for the defence. In addition, a reality-check of dysfunctional convictions was conducted. That is, empirical support, counter-proofs, counter-arguments, logical contradictions, alternative perspectives etc. were systematically investigated to substitute dysfunctional cognitions with functional ones. Finally, the functional cognitions were tested and trained in the former demotivating situations.

There are further techniques that could be used as elements of cognitive-behavioral training to reduce dysfunctional cognitions (cp. Balevre, 2001; Choudhury, 2013, *downward arrow technique*; Ellis & Dryden, 1997; Sauerland & Müller, 2012, *paradox intervention, worst-case scenarios*). For example, the training of *hardiness* or *self-efficacy* could be useful as these functional cognitive schemes probably buffer against stress and facilitate motivation (Kobasa, 1979; Maddi, 2005; Quick, Quick, Nelson & Hurrell, 1997).

#### 4. Conclusion

The fascinating and largely unexplored field of dysfunctional cognitions in the workplace has a flourishing future in store. Dysfunctional cognitions often are the only factor that can be influenced in the interplay of performance relevant factors. Ignoring employees’ dysfunctional cognitions is clearly a waste of human resources. As shown, empirical evidence indicates that the reduction of dysfunctional cognitions can to a large extent help fulfil achievement potential.

Often, people base elementary decisions on irrational beliefs, and many predicate their entire lives on unquestioned dogmas. Without knowing the real reason, some people tend to suffer emotionally and professionally from dysfunctional cognitions throughout their entire work lives. By means of sensitization, questioning, and validation procedures, such debilitating cognitive patterns can be circumvented with many positive outcomes to boot. How would a person’s achievement potential be affected if he were able to free himself from perfectionistic aspirations and enjoy his work? What are the professional consequences for a leader who suddenly realizes that he does not always have to be liked by everyone? What extensions of a person’s behavioral repertoire are possible when he is able to move beyond rigid “either-or-“ thinking patterns to “as-well-as-“ reasoning?

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