
INDUSTRIAL BOREDOM: AN EXPLORATION OF CAUSES, CONSEQUENCES AND CONTROL

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ABSTRACT

This paper examined the concept of industrial boredom; especially as it has to do with its causes, consequences and control. The paper adopted a review approach where extant literature was diagnosed for existing views on the areas of interest to the authors. Boredom was perceived as a state of unpleasantness experienced by the worker in a work context that is due to affective state resulting from the underuse of his or her physical or cognitive capacity. This condition was found to be prevalent in several industrial settings; and at peak during economic downturns which are usually marked by job losses and workforce cuts; which compel people to accept jobs that are below their delivery capacity in compliance with the cliché that half bread is better than none. Several factors have equally been adduced as triggers of boredom- ambience, repetitive job and incomplete task; just as consequences of boredom were found to include risk of accidents, health challenges, job dissatisfaction, absenteeism and many more. The paper further suggested increased attention to job, and applying supporting stimulation as some ways to remedy boredom. The paper further concluded that boredom is undesired in the organization and must be discouraged by every method possible; and recommended that employees need to develop job crafting skills as a way to minimize boredom; and that management should create lively work environments that will not allow for any dull moment.

Keywords: Industrial, Boredom, Causes, Consequences, Control.

INTRODUCTION

Boredom is a very challenging experience for members of any work domain, both employees and employers because being physically present but unmotivated and unable to apply one's full potential can become costly for organizations and harmful to employees' health and general well-being. Boredom is considered as one of the most important psychological factors that adversely affect workers and their productivity. Accordingly, there has been a growth in research interests concerning workplace emotions (e.g. Ashkanasy *et al.* 2000; Briner 1999; Fineman 2000; Fisher and Ashkanasy 2000; Payne and Cooper 2001, Weiss and Brief 2001). There has also been a great deal of research on motivation and its linkage with boredom (see e.g. Kanfer *et al.* 2006).

A study by Malachowski (2005) shows that almost one-third of 10,000 surveyed employees spent 2 hours on private affairs every working day due to boredom. Consequently, the associated cost is estimated at over \$750 billion per annum in the US alone. Traditionally studied among blue collar workers, emerging evidence also indicates that workplace boredom may equally be a serious problem among white collar employees. Loukidou, Loan-Clarke, and Daniels (2009) state that "increases in the educational levels of the workforce, plus the use of technology to routinize working practices has meant that the skills of workers, even in many white-collar jobs, exceed the requirements of their jobs" (p. 382). The implication is that many workers possess greater resources than their jobs demand, resulting in under utilization of capacity; especially during periods of economic recession like what is being experienced in Nigeria where highly educated employees accept lower ranked jobs in times of low job security which (Leonhardt, 2009; Rosenwald, 2008) had argued is capable of exacerbating the pervasiveness of workplace boredom.

Other studies have equally revealed that feelings of boredom at work are common, with prevalence estimates ranging from a quarter up to 87% of the employees reporting that they feel bored at work at least some times (cf. Fisher, 1993; Mann, 2007; Van der Heijden, Schepers, & Nijssen, 2012; Watt & Hargis, 2010). In a similar vein, research has demonstrated that work-related boredom links to a variety of negative outcomes such as low effort and performance, job dissatisfaction, absenteeism, turnover intentions, counterproductive work behavior, and work injuries (Bruursema, Kessler, & Spector, 2011; Frone, 1998; Kass, Vodanovich, Stanny, & Taylor, 2001; Reijseger *et al.*, 2013; Spector *et al.*, 2006). More so, Bored employees may disengage from a work role that lacks satisfying activities (Eastwood, Frischen, Fenske, & Smilek, 2012), or does not enable full use of individual capabilities (Harju & Hakanen, 2016). Drawing from the foregoing, we shall examine the concept of industrial or workplace boredom,

focusing on its conceptualization, causes, consequences and control, otherwise referred to as the 4Cs of boredom.

CONCEPTUALIZING BOREDOM

Boredom has been the subject of inquiry for diverse theoretical disciplines, including philosophy (see Durkheim 1972 [1893]; Sartre 1947), psychology (Vodanovich and Kass 1990), sociology (Barbalet 1999; Marx 1967 [1844]) and management (Hackman and Oldham 1976). Various approaches have concentrated on aspects of boredom in relation to arousal (e.g. Zuckerman 1979), motivation (e.g. Greenson 1953), behavior (e.g. Wallbott 1998) and cognition (e.g. Damrad-Frye and Laird 1989). In respect of arousal, one view of boredom is that boredom reflects a non-optimal level of arousal (Zuckerman 1979). However, there is no definite conclusion concerning whether boredom is reflected by an increase in arousal (Berlyne 1960; Thackray *et al.* 1977) or by a decrease (Fiske and Maddi 1961; Geiwitz 1966).

In relation to motivation, some have argued that boredom reflects disinclination to action (Greenson 1953), while others have argued that boredom reflects sensation-seeking attitudes and a motivation for individuals to change their current 'boring' situation (Berlyne 1960; Zuckerman 1979). An inconsistent pattern is also evident in respect to defining the behavioural aspects of boredom. While some studies indicate that boredom is reflected in low movement activity (Wallbott 1998), others indicate restless movement such as bodily-focused repetitive behaviour (e.g. nail biting) may reflect boredom (Williams *et al.* 2007). Moreover, behavioural *displays* of boredom may be acceptable in some jobs, but not others (cf. Humphrey 2000), leading to a potential mismatch between displayed and felt boredom.

Cognitive indicators of boredom are perhaps more consistent, including factors such as difficulty sustaining attention (Damrad-Frye and Laird 1989) and off-task thoughts (Gardner *et al.* 1989; McBain 1970). However, like approaches based on arousal, motivation and behaviour, conceptualizing boredom by cognitive indicators runs the risk of defining a phenomenon by its consequences, thus offering a circular definition. Perhaps the most promising route is to conceptualize boredom as an emotion or affective state that can be defined in relation to the two major dimensions of affect. Both state and trait affects can be described by two core dimensions: pleasure–displeasure and activation–deactivation (Russell 2003). Boredom is categorized as an unpleasant and deactivated affect (Watson and Tellegen 1985, see also Conrad 1997; Farmer and Sundberg 1986; Fisher 1993; Kass *et al.* 2003; O'Hanlon 1981). In this respect, boredom is similar to depression. This similarity has been noted elsewhere (Farmer and Sundberg 1986). Although the two affects are correlated, a study of workplace affect indicated that work-related boredom is distinct from work-related depression (Daniels 2000).

More specifically, work related boredom has a stronger relationship with the activation–deactivation axis of affect, and work-related depression a stronger relationship with the pleasure–displeasure axis of affect. In other words, although both are unpleasant, depression is the more unpleasant of the two affects. Moreover, while the polar opposite of work-place depression appears to be work-related pleasure or happiness, the polar opposite of work-related boredom is work-related enthusiasm (Daniels 2000). This is because the phenomenological experience of affect has motivational, physiological, behavioural and cognitive correlates, even though the nature of these associations may vary between individuals or across individuals over time (Lang 1985, 1988; Lazarus 1999; Martin and Clore 2001; Russell 2003).

Nevertheless, conceptualizing boredom as an affective state does require some further consideration. In one of the more widely cited definitions, Fisher (1993) states that boredom is a transient, unpleasant affect, much shorter-lived than attitudes such as job satisfaction. It is questionable whether boredom reflects simply a transient state. For example, Gemmill and Oakley (1992) distinguish between chronic and responsive boredom, with the first being ‘a largely unconscious, enduring experience of the absence of meaning in one’s work life’ (p. 359; see also Brisset and Snow 1993; Darden and Marks 1999). Like other affects, it is possible to distinguish between state boredom, which is transient, and trait boredom, which is more pervasive and enduring (Watson *et al.* 1988).

Viewing boredom as an affective state implies that it is reactive to the environment. In this respect, boredom may be seen as a property of the jobs people do. Viewing boredom as a trait implies boredom is a relatively stable property of the individual. In between these two extremes are two strands of research that locate the individual in his/her work environment. One strand of research locates individuals in their social context and attempts to understand how social context influences individuals or the meaning individuals extract from their social context. The other strand maps boredom directly onto the processes by which individuals relate their work experiences to personal goals. From whichever strand one looks at boredom, scholars have offered fitting definitions.

Workplace boredom refers to an unpleasant affective state resulting from the underuse of a person’s physical or cognitive capacity at work (Kass, Vodanovich, & Callender, 2001; Loukidou et al., 2009; Ikulas & Vodanovich, 1993). Boredom is equally seen as an aversive affective state associated with a lack of interesting, meaning, and attention-based engagement (e.g., Eastwood, Frischen, Fenske, & Smilek, 2012; Nett, Goetz, Daniels, 2010; Fahlman, Mercer-Lynn, Flora, & Eastwood, 2013; Vodanovich et al., 2011). Job boredom is regarded as the opposite of work engagement (Salanova, Del Líbano, Llorens, & Schaufeli, 2014); and more specifically, an unpleasant state of passiveness that is characterized by attentional difficulties and

a distorted sense of time (Reijseger et al., 2013; Fisher, 1993). More so, boredom can be viewed as a condition characterized by perception of one's environment as dull, tedious, and lacking in stimulation to the extent that it can affect job delivery adversely. This can also result from leisure and a lack of aesthetic interests. The majority of studies on workplace boredom focus on factors that cause boredom. Job characteristics, like work underload and monotony, have frequently been considered as important determinants of workplace boredom (e.g., Shackleton, 1981). It is also widely accepted that some individuals are more boredom prone than others, explaining why individuals in similar jobs and with similar requirements may vary in their levels of boredom (Farmer & Sundberg, 1986).

CAUSES OF WORKPLACE BOREDOM

Several factors have been adduced to be responsible for the occurrence of boredom. Some of such are here presented.

Repetitive Nature of Work- This is when boredom is caused by repetitive work. When workers do the same job over prolonged period of time, then the chance of being bored from that particular work arises. It is factual that, when work repeated overtime, it becomes machine like and requires no logical support, reduced concentration on the part of the worker which results in boredom. The best method to overcome boredom at this stage is 'job rotation' or exchange of jobs. By this, worker become more attentive, they concentrate on new task which automatically encourage them to do work. In a study by Wyatt (1929) some people were engaged in cutting cigarette papers and making cigarette alternatively, at an interval of 1 ½ hours. Their performance was better than those who were engaged in either of the tasks for the whole day. Maier (1970) found that because of exchange of the jobs, improvement in work was noticed. Similarly, in a laboratory study of assembling bicycle chains, Wyatt (1929) observed that output increased from 2.4 to 5 due to change in work. Wyatt and Frasier concluded that reduction in output is constantly noted, especially where there is constant complaint of boredom. Thus, variability in the same job should be permitted as far as possible.

Rest Pause- A long rest pauses usually creates disturbance in different types of mental work because the worker loses the continuity and interest of work. The remedy is to introduce frequent and short rest pauses in order to be more effective. The amount of rest pause varies with the nature of work because manual work require more frequent rest pause as against mental work.

Ambience- Unfavourable ambience also creates boredom. When an employee dislikes their workplace automatically after some time they get bored. One of the remedy to overcome this problem is introduction of music. Music at workplace helps in reducing boredom, improving the mental state of workers and raising the level of production and efficiency. A study by Kerr

(1945) suggested that music not only improved production, it also improved the attitude of the workers and had a favourable effect on their mental state. Smith (1947) reported a finding which revealed that there was an average increase of 7% in the day shift and 17% in the night shift with the introduction of music. However, McGehee and Gardner (1949)⁸ did not find any improvement in production due to the introduction of music.

Intelligence- One of the causes of boredom is intelligence. It is quite unusual that the most important asset of the workers' leads to boredom. The reason behind that is that a worker with low intelligence may be satisfied with the job like floor cleaning but under such situations an intelligent worker will not find any interest and job satisfaction. How to overcome this problem is one of the major concerns for employer. Here, employers try to designate the work based on employee's capability and interest and of course their personal profile will definitely minimize the chance of being bored.

Incomplete Task- If work is not completed at the right time, the worker can develop a sense of dissatisfaction which creates boredom. If management divides the task into different subparts and when a part is completed the employee experiences a feeling of completion. According to Maier (1970), "Task completion represents a form of motivation inherent in the nature of job and therefore is one of the most practical ways for creating interest".

CONSEQUENCES OF BOREDOM

Lau et. al., (2003), Bruursema et al., (2011); and Spector et al., (2006) are in convergence in their reports that boredom helps to build a counterproductive behavior at the workplace. Harmful effects of boredom have been empirically noticed. Boredom is considerably related to negative affect like anger, depression and anxiety (Ahmed, 1990; Gana & Akremi, 1998; Gordon, Wilkinson, McGown, & Jovanoska, 1997; Rupp & Vodanovich, 1997; Sommers and Vodanovich, 2000; Vodanovich, Verner, & Gilbride, 1991, Game, 2007; Sommers & Vodanovich, 2000; Wiesner, Windle & Freeman, 2005)

Boredom and associated serious negative consequences have been reported across many other high risk settings including unmanned aerial vehicle operation (Thompson et al., 2006), process control plant supervision (Sheridan, Vámos, & Aida, 1983), train engineers (Haga, 1984), train drivers, and professional truck drivers (Dunn & Williamson, 2011; Oron-Gilad, Ronen, & Shinar, 2008), as well as anesthesiologists (Weinger, 1999). In boring environments where task load is low, typical in highly automated supervisory control environments, operators often find other tasks to help them sustain some level of attention and in many cases, simply to help them stay awake. With a global push to introduce more automation and autonomy into numerous

safety critical work environments, (e.g., driverless cars, positive train control in rail, and completely automated mines), boredom will likely be a growing problem.

Research has shown that boredom is often associated with significant health problems. Boredom has been linked to premature death due to cardiovascular disease (Britton & Shipley, 2010), and has been given as a primary reason for recreational drug use (McIntosh, MacDonald, & McKeganey, 2005). Boredom proneness has been linked to increasing risk of anxiety and depression (Sommers & Vodanovich, 2000; Vodanovich, Verner, & Gilbride, 1991), as well as substance abuse (Farmer & Sundberg, 1986; LePera, 2011) and eating disorders (Abramson & Stinson, 1977). Recent research suggests that job boredom has an affective, cognitive, and behavioral component (Reijseger et al., 2013). For example, bored employees may feel dissatisfied, have a distorted sense of time (standing still or moving slowly), and engage in distractions. Hence, for organizations, employee boredom might be both unproductive and counterproductive, because some studies associate it with employee misbehavior (Bruursema, et al., 2011). Furthermore, a study on manufacturing workers found that job boredom was linked to higher job dissatisfaction and absenteeism (Kass, et al., 2001). A more recent study on office workers also found a positive relationship between job boredom and turnover intentions (Kass, et al. 2001). These studies imply that job boredom is experienced in diverse working environments, and that it may also have negative organizational and individual consequences (Harju, et al., 2014).

Other consequences of boredom may include the following:

- Reduction in the efficiency of the worker.
- Loss interest on particular task.
- Reduction in feeling of job satisfaction.
- Downfall in production.
- Various health problems like, sleepiness, nervousness, anxiety, laziness etc.
- Workers become sarcastic.
- Lack of concentration and many more

CONTROL FOR BOREDOM

Fisher (1993) has identified two major ways in which individuals might cope with the experience of boredom. These are (i) focusing attention on the task (see also, Hamilton *et al.* 1984) and/or (ii) seeking additional stimulation. In relation to this first strategy, Game (2007) has indicated among the most successful strategies for dealing with boredom is engaging with the task in such away as to make it more interesting. Examples of seeking additional stimulation include

daydreaming, singing, talking to nearby co-workers, playing mental games, fidgeting and looking around, reading novels or writing letters to friends, taking more interest in clients, asking for more work or training, finding additional tasks to do or helping other employees (see also Fisher 1987; Game 2007).

In a study of clerical workers, Baker (1992) identified a set of coping strategies similar to Fisher's, but also provided evidence about the motives underpinning these strategies. For example, some of the sample that was underloaded would ask colleagues for additional work. However, this was done in order to retain an element of control over their workload, since it was felt better to help colleagues than have work allocated by supervisors. Another activity to cope with periods of underload was to work more slowly in order to store work for slack periods. Baker also found that individuals would engage in various forms of impression management activity in order to present the facade of being busy when in fact they were not. However, where supervisors were not able to observe clerical workers, staff would engage in non-work conversations, read books or magazines or eat. Similarly, Molstad (1986), in a study of industrial brewery work, found that individuals engage in distractions. Molstad reports that activities engaged in include forms of fantasizing, daydreaming, playing, singing and talking. Interestingly, it is suggested that continuing to perform the work, but without giving it attention and engaging in flights of fancy, is preferable to disengaging from the task, as refocusing attention on reality is more painful than concentrating on mentally pleasurable activities (p. 227).

Molstad argues that these coping strategies therefore reinforce employees' alienation from work. Although coping is often characterized in many studies as an individual activity (see e.g. Lazarus 1999) for a review), coping has a collective element (Korczynski 2003). Studies indicate a social dimension to coping with boredom in the workplace. Indeed, the presence of other people has been proposed as one way of alleviating boredom while performing a monotonous task (Bond and Titus 1983). Roy's (1959) account of the 'banana game', played by workers is a good example of how co-workers can help reduce the boredom inflicted by a non stimulating work environment. This reflects coping strategies based on distraction. Garson (1976) and Burawoy (1979) also identified the importance of gameplaying in industrial settings. More recently, Taylor and Bain (2003, 1495) identified the use of humour in call centres as a mechanism for relief from boredom and routine. Taylor and Bain (2003) also identified the use of gossip about, and among, call-centre employees as another way of alleviating boredom. Employees, including team leaders would 'take the piss' out of each other, with the roles of victim and persecutor rotating freely.

Other remedies include that:

- ✓ Psychological *guidance* and counseling should be given to neurotic workers. Because neurotic workers lose interest in the job and get bored very quickly.
- ✓ If repetitive work is made entirely automatic or semi-automatic, the feeling of boredom can be reduced to a considerable extent.
- ✓ Group discussion can be used to reduce boredom.
- ✓ Feeling of progress in their experience when introduced amongst the workers in workplace it will avoid boredom.
- ✓ Introduction of social events also reduce the work boredom like picnic, formal get-together etc.
- ✓ Encourage informal group in workplace this will differently reduce the boredom.
- ✓ Boredom reduces by giving employees responsibility and opportunities of judgments.

CONCLUSION

Workplace boredom refers to an unpleasant affective state resulting from the underuse of a person's physical or cognitive capacity at work. Boredom can result in numerous unhealthy conditions for the affected employee; hence remains an undesired occurrence and the need to remedy it cannot be undermined. Generally, boredom can result in reduction in the efficiency of the worker, loss interest on particular task, reduction in feeling of job satisfaction, downfall in production and several other health problems like, sleepiness, nervousness, anxiety, laziness etc. these kinds of conditions would definitely affect productivity if not properly checked. Boredom can be ameliorated using several methods; including the use of psychological guidance and counseling, job design and redesign as well as the creation of social events that encourages employee socialization.

RECOMMENDATIONS

1. Employees need to develop job crafting skills as a way to minimize boredom.
2. Management should create lively work environments that will not allow for any dull moment.
3. Management should engage in periodic job designs and redesign.
4. Employees should not be under engaged with work.
5. Involvement in informal group activities should be stimulated in the workplace.

REFERENCES

- Ashkanasy, N.M., Härtel, C.E.J. and Zerbe, W.J. (eds) (2000). *Emotions in the Workplace: Research, Theory and Practice*. Westport, CT: Quorum Books.
- Barbalet, J.M. (1999). Boredom and social meaning. *British Journal of Sociology*, 50, 631–646.
- Berlyne, D. E. (1960). *Conflict, arousal, and curiosity*. New York, NY: McGraw-Hill Book Company.
- Berlyne, D.E. (1960). *Conflict, arousal and curiosity*. New York: McGraw-Hill.
- Briner, R. B. (1999). The neglect and importance of emotion at work. *European Journal of Work and Organizational Psychology*, 8(3), 323–346.
- Brisset, D. and Snow, R.P. (1993). Boredom: where the future isn't. *Symbolic Interaction*, 16, 237–256.
- Baumeister, R. F., Zell, A. L., & Tice, D. M. (2007). How emotions facilitate and impair self-regulation. In J. J. Gross (Ed.), *Handbook of emotion regulation* (pp. 408–426). New York, NY: The Guilford Press.
- Bruursema, K., Kessler, S. R., & Spector, P. E. (2011). Bored employees misbehaving: The relationship between boredom and counterproductive work behavior. *Work & Stress*, 25, 93–107.
- Conrad, P. (1997). It's boring: notes on the meanings of boredom in everyday life. *Qualitative Sociology*, 20, 465–475.
- Damrad-Frye, R. and Laird, J.D. (1989). The experience of boredom: the role of self-perception of attention. *Journal of Personality and Social Psychology*, 57, 315–320
- Daniels K. (2000). Measures of five aspects of affective well-being at work. *Hum Relat.*; 53:275–294.
- Durkheim, E. (1972 [1893]). *Suicide: A study in sociology*. London: Routledge & Kegan Paul
- Dunn, N., & Williamson, A. (2011, July). *Monotony in the rail industry: The role of task demand in mitigating monotony-related effects on performance*. Paper presented at the Ergonomics Australia–HFESA 2011 Conference Edition

Eastwood, J. D., Frischen, A., Fenske, M. J., & Smilek, D. (2012). The unengaged mind defining boredom in terms of attention. *Perspectives on Psychological Science*, 7(5), 482–495. <http://dx.doi.org/10.1177/1745691612456044>

Fahlman, S.A.; Mercer-Lynn, K.B.; Flora, D.B.; Eastwood, J.D. (2013). Development and validation of the multidimensional state boredom scale. *Assessment*, 20, 68–85.

Farmer, R. and Sundberg, D. (1986). Boredom proneness: the development and correlates of a new scale. *Journal of Personality Assessment*, 50, 4–17.

Farmer, R., & Sundberg, D. (1986). Boredom proneness: The development and correlates of a new scale. *Journal of Personality Assessment*, 50, 4–17.

Fineman, S. (2000). *Emotion in organizations*, 2nd edition. London: Sage.

Fisher, C. D. (1993). Boredom at work: A neglected concept. *Human Relations*, 46, 395–417.

Fisher, C.D. and Ashkanasy, N.M. (2000). Fiske, D.W. and Maddi, S.R. (1961). *Functions of Varied Experience*. Homewood, IL: Dorsey Press.

Frankl, V.E. (1984). *Man's search for meaning*. 3rd edition. New York: Pocket Books.. The emerging role of emotions in work life: an introduction. *Journal of Organizational Behavior*, 21, 123–129.

Frone, M. R. (1998). Predictors of work injuries among employed adolescents. *Journal of Applied Psychology*, 83, 565–576.

Game, A. M. (2007). Workplace boredom coping: Health, safety, and HR implications. *Personnel Review*, 36, 701–721.

Geiwitz, J.P. (1966). Structure of boredom. *Journal of Personality and Social Psychology*, 3, 592– 600.

Gemmill, G. and Oakley, J. (1992). The meaning of boredom in organizational life. *Group and Organizational Management*, 17, 358–369.

Greenson, R. (1953). On boredom. *Journal of the American Psychoanalytic Association*, 1, 7–21.

Hackman, J. R., & Oldham, G. R. (1976). Motivation through the design of work: Test of a theory. *Organizational Behaviour and Human Performance*, 16, 250–279.

Haga, S. (1984). An experimental study of signal vigilance errors in train driving. *Ergonomics*, 27, 755-765.

Harju, L., Hakanen, J. J. & Schaufeli, W. B. (2014). Job boredom and its correlates in 87 Finnish organizations *Journal of Occupational and Environmental Medicine*, 56(9), 911-918

Harju, L., & Hakanen, J. J. (2016). An employee who was not there: a study of job boredom in white-collar work. *Personnel Review*, 45(2), 374–391. <http://dx.doi.org/10.1108/PR-05-2015-0125>.

Humphrey, R.H. (2000). The importance of job characteristics to emotional displays. In Ashkanasy, N., Zerbe, W. and Hartel, C. (eds), *Emotions in the Workplace: Research, Theory, and Practice*. Westport, CT: Quorum Books, pp. 236–249.

Kanfer, R., Chen, G. and Pritchard, R. (2006). *Work motivation: Past, present and future*. Mahwah, NJ: Lawrence Erlbaum.

Kass, S. J., Vodanovich, S. J., Stanny, C., & Taylor, T. (2001). Watching the clock: Boredom and vigilance performance. *Perceptual and Motor Skills*, 92, 969–976

Kass, S. J., Vodanovich, S. J., & Callendar, A. (2001). State-trait boredom: Relationship to absenteeism, tenure, and job satisfaction. *Journal of Business and Psychology*, 16, 317–327

Lang, P.J. (1985). The cognitive psychophysiology of emotion ? Fear and anxiety. In Tuma, A.H. and Maser, J.D. (eds), *Anxiety and the Anxiety Disorders*. Hillsdale, NJ: Erlbaum, pp. 131–170.

Lang, P.J. (1988). What are the data of emotion. In Hamilton, V., Bower, G.H. and Frijda, N. (eds), *Cognitive Perspectives on Emotion and Motivation* (NATO ASI Series D Vol. XXXIV). Dordrecht: Kluwer, pp. 173–191.

Lazarus, R.S. (1999). *Stress and emotion: A new synthesis*. New York: Springer.

Leonhardt, D. (2009, March 4). Job losses show breadth of recession. *The New York Times*. p. B1.

Loukidou, L., Loan-Clarke, J., & Daniels, K. (2009). Boredom in the workplace: More than monotonous tasks. *International Journal of Management Reviews*, 11(4), 381–405.

Mann, S. (2007). The boredom boom. *The Psychologist*, 20, 90–93.

Malachowski, D. (2005). Wasted time at work costing companies billions. Salary.com. Retrieved 20 February 2009 from http://www.salary.com/careers/layouthtmls/crel_display_nocat_

Martin, L.L. and Clore, G.L. (2001). *Theories of mood and cognition: A User's Handbook*. Mahwah, NJ: Erlbaum, pp. 135–158

Marx, K. (1967 [1844]). *Economic and philosophic manuscripts*. Moscow: Progress Publishers.

McBain, W.N. (1970). Arousal, monotony, and accidents in line driving. *Journal of Applied Psychology*, 54, 509–519.

Nett, U. E., Götz, T., & Daniels, L. M. (2010). What to do when feeling bored?: Students' strategies for coping with boredom. *Learning and Individual Differences*, 20(6), 626-638

Oron-Gilad, T., Ronen, A., & Shinar, D. (2008). Alertness maintaining tasks (AMTs) while driving. *Accident Analysis & Prevention*, 40, 851-860.

Oron-Gilad, T., & Shinar, D. (2000). Driver fatigue among military truck drivers. *Transportation Research Part F: Traffic Psychology and Behaviour*, 3, 195-209.

O'Hanlon, J. F. (1981). Boredom: Practical consequences and a theory. *Acta psychologica*, 49(1), 53-82.

Payne, R.L. and Cooper, C.L. (eds) (2001). *Emotions at work: Theory, research and applications in management*. Chichester: Wiley

Reijseger, G, Schaufeli, the paint dry at work: psychometric examination of the Dutch Boredom Scale. *Anxiety Stress Coping*. 26:508–525.

Reijseger, G., Schaufeli, W. B., Peeters, M. C., Taris, T.W., van Beek, I., & Ouweneel, E. (2013). Watching the paint dry at work: Psychometric examination of the Dutch boredom scale. *Anxiety, Stress & Coping*, 26(5), 508–525. <http://dx.doi.org/10.1080/10615806.2012.720676>.

Russell, J.A. (2003). Core affect and the psychological construction of emotion. *Psychological Review*, 110, 145–172.

Salanova, M., Del Líbano, M., Llorens, S., & Schaufeli, W. B. (2014). Engaged, workaholic, burned-out or just 9-to-5? Toward a typology of employee well-being. *Stress and Health*, 30(1), 71–81. <http://dx.doi.org/10.1002/smi.2499>.

Sartre, J.P. (1947). *Existentialism*. New York: Philosophical Library Ser374_Par555.html

- Shackleton, V. J. (1981). Boredom and repetitive work: a review. *Personnel Review*, 10(4), 30-
- Sheridan, T. B., Vámos, T., & Aida, S. (1983). Adapting automation to man, culture and society. *Automatica*, 19, 605-612.
- Spector, P. E., Fox, S., Penney, L. M., Bruursema, K., Goh, A., & Kessler, S. (2006). The dimensionality of counter productivity: Are all counterproductive behaviors created equal? *Journal of Vocational Behavior*, 68, 446–460.
- Sommers, J., & Vodanovich, S. J. (2000). Boredom proneness: Its relationship to psychological and physical-health symptoms. *Journal of Clinical Psychology*, 56, 149 –155.
- Bailey, J.P. and Touchstone, R.M. (1977). Physiological, subjective and performance correlates of reported boredom and monotony while performing a simulated radar control task. *FAA Office of Aviation Medicine Reports*, 9, 75–78.
- Van der Heijden, G. A. H., Schepers, J. J. L., & Nijssen, E. J. (2012). Understanding workplace boredom among white collar employees: Temporary reactions and individual differences. *European Journal of Work and Organizational Psychology*, 21, 349 –375. doi:10.1080/1359432X.2011.578824
- Vodanovich, S. J., Kass, S. J., Andrasik, F., Gerber, W. D., Niederberger, U., & Breaux, C. (2011). Culture and Gender Differences in Boredom Proneness. *North American Journal of Psychology*, 13(2), 53-66.
- Vodanovich, S.J. and Kass, S.J. (1990). A factor analytic study of the boredom proneness scale. *Journal of Personality Assessment*, 55, 115–123
- Wallbott, H.G. (1998). Bodily expression of emotion. *European Journal of Social Psychology*, 28, 879– 896
- Watt, J. D., & Hargis, M. B. (2010). Boredom proneness: Its relationship with subjective underemployment, perceived organizational support, and job performance. *Journal of Business and Psychology*, 25, 163–174. doi:10.1007/s10869-009-9138-9
- Watson, D. and Tellegen, A. (1985). Toward a consensual structure of mood. *Psychological Bulletin*, 98, 219–235.
- Watson, D., Clark, L.A. and Carey, G. (1988). Positive and negative affectivity and their relation to anxiety and depressive disorders. *Journal of Abnormal Psychology*, 97, 346–353.

Weinger, M. (1999). Vigilance, boredom, and sleepiness. *Journal of Clinical Monitoring and Computing*, 15, 549-552.

Weiss, H.M. and Brief, A.P. (2001). Affect at work: a historical perspective. In Payne, R.L. and Cooper, C.L. (eds), *Emotions at Work: Theory, Research and Applications in Management*. Chichester: Wiley, pp. 133–170

Wiesner, M., Windle, M., & Freeman, A. (2005). Work stress, substance use, and depression in young adults: An examination of main and moderator effect models. *Journal of Occupational Health Psychology*, 10, 83–96.

Zuckerman, M. (1979). *Sensation seeking*. John Wiley & Sons, Inc. Darden, D. K. (1999).