

# PARADOX MINDSET IN MANAGEMENT: THEORY AND MEASUREMENT

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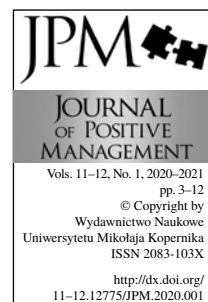
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## Abstract

**Purpose:** This article presents an overview of the constructive functions of embracing (instead of rejecting) contradictions (otherwise known as a paradox mindset or Janusian thinking). It also demonstrates the positive impact of tension resulting from the cognitive consideration of simultaneous contradictions (as opposed to the traditional conviction that such cognitive dissonance is experienced as uncomfortable and reduced).

Additionally, this article highlights the positive impact of a paradox mindset on augmenting teams' and institutions' creativity and performance. It also documents a method of evaluating the propensity for embracing contradictions (i.e., a paradox mindset).

**Design/methodology/approach:** This article documents the construction and validation of an assessment tool, i.e., the Influence of Contradictions Questionnaire (ICQ), for evaluating the level of propensity for a paradox mindset.

**Findings:** In the validation process ( $n = 120$  Anglophonic sample), the ICQ proved to have positive psychometric parameters (discrimination power and reliability).

**Social implications:** The ICQ can be used for scientific purposes, e.g., for comparison between segments of society or for finding possible correlations with other personality traits (e.g., empathy). It could also serve as an evaluation tool for teams' and individuals' levels of propensity for conceptual blending—especially when measuring the results of training in this area.

**Originality/value:** This is a novel approach, both in the theoretical review of various manifestations of embracing contradictions, as well as in designing a comprehensive evaluation method.

**Keywords:** contradictions, Janusian thinking, conceptual blending, creativity, embracing contradictions, divergent thinking

**Paper type:** Research paper

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## 1. Introduction

Contradictions often generate novel and breakthrough solutions (Rothenberg, 2015; Heracleous, 2020). According to Harvard Business Review (Hill et al., 2014), creative leaders should simultaneously encompass several oppositions, such as:

- Value and corroborate individual needs with the needs of the team;
- Balance calmness with a feeling of urgency;
- Consider bottom-up initiatives and top-down interventions.

A real-life example is Toyota Company, who has been documented to succeed because they nurture contradictions and paradoxes in various aspects of organizational life (Takeuchi et al., 2008).

Moreover, employees' tendency to embrace contradictions has a positive influence on their creativity and professional growth, and a leader's contradictory way of thinking is positively associated with their employees' innovativeness (Liu et al., 2019).

Additionally, there is evidence to suggest that, in the past, famous scientists made their breakthrough discoveries by balancing contradictions, such as Niels Bohr's breakthrough finding that energy acts like both waves and particles, with these two states existing simultaneously, even though they cannot be observed together; or Einstein's observation that objects may be both at rest and moving, depending on the position of the observer. Both insights led to new discoveries and ground-breaking theories: The relativity theory and the theory of quantum mechanics.

These examples indicate that embracing contradictions may generate multiple positive outcomes, especially in the field of employees' and organizations' creativity and innovativeness. In this vein, it seems critical to have a closer look at the phenomenon of accepting and embracing simultaneous contradictions. However, this new approach requires a tangible measurement tool, so as to be able to compare the propensity for embracing contradictions.

## 2. Delineating the Phenomenon of Embracing Contradictions

Organizations are full of contradictions, which, if open and accepted, may create a fulcrum for rapid growth. Creative ideas and better ways of doing things are often generated by constructive contradictions (Ashkena and Bodell, 2013). Embracing contradictions and turning them into a growth lever is, for example, an essence of the success of Chinese firms; they have a tradition of embracing contradictions, which stimulates the innovation of technology and business management (Li-Hua, 2014).

Considering this phenomenon in more depth, it falls under many names, such as conceptual blending, paradox mindset, and Janusian thinking. *Conceptual Blending* is a form of generating new ideas based on combining two concepts

(Oakley, 1998). These concepts may be distant or even contradictory, and elements and critical relations from diverse fields and situations are blended in a conscious or subconscious process (Fauconnier and Turner, 2003). An important type of conceptual blending is *divergent thinking*, which involves blending ideas, even if they are distant and unrelated (Guilford, 1950; Runco, 2007). Divergent thinking is seen as an indicator of creative potential (Runco and Acar, 2012).

*Paradox mindset* is the propensity for embracing and being energized by tensions resulting from accepting simultaneous contradictions. In organizations, a paradox mindset has a positive impact on innovativeness; for example, a manager's paradox mindset correlates with their employees' creativity at work (Liu et al., 2019).

*Constructive tension* refers to when individuals that possess a paradox mindset are energized by positive tension and respond to a contradictory situation by developing a sense of optimism and engaging in successful problem solving (Sleesman, 2019). This finding indicates the existence of constructive tension (Senge, 2006), in contrast to the previous conviction that the tension generated by a contradiction is negative, creating so-called cognitive dissonance, forcing an individual to reduce this tension (Festinger, 1957; Festinger et al., 2009). The positive tension generated by embracing (and not rejecting) contradictions energizes employees, thereby helping them to leverage and improve their performance and innovation (Miron-Spektor et al., 2017).

*Janusian thinking* is a term inspired by Janus, an ancient Roman god with two faces, both looking in opposite directions. Janusian thinking indicates an aptitude to simultaneously imagine or think about two contradictory concepts (Michalko, 2012), and it allows an individual to think paradoxically. Interestingly, Janusian thinking has been shown to have played a significant role in the inventions of outstanding scientists, as it was found that they conceived multiple opposites simultaneously (Rothenberg, 1971, 2011).

### **3. Creativity and a Paradox Mindset**

Embracing contradictions often creates a new “outside-the-box” perspective (Miron-Spektor and Erez, 2019), enabling reframing of previous assumptions and modes of operation. This action serves as a sort of an inspiration for the cognitive system, bringing (often joyful) “a-ha” moments, thus stimulating the brain's plasticity (Pellis and Pellis, 2009).

It has been documented that well-known creative people are open to contradictions (Miron-Spektor et al., 2011; Rothenberg, 2011; Miron-Spektor and Erez, 2019). For instance, Miron-Spektor et al. (2011) posited that those who are able to reflect on opposing ideas are more creative than those only capable of considering a single concept.

Some examples of contradictions embraced by creative individuals can be found in research based on interviewing the most creative individuals from diverse fields and locations (Csíkszentmihályi, 1997): They possess high levels of physical energy, but spend a great deal of time quiet and at rest; they enjoy being playful, but are also very disciplined; they operate on a continuum, with imagination and fantasy at one end and a firm sense of reality at the other; they are simultaneously humble and proud; regarding their work, they are both passionate and objective.

Some more examples from the business field are as follows: Creative managers have in-depth knowledge but instead tend to rely on intuition; they work hard, but also take time out to do nothing; they generate numerous ideas, most of which tend to be useless; they desire success, but learn both how to fail and from failures; they listen to experts, but know how to disregard them if necessary (von Oech, 2008). Additionally, creative managers carry out balanced and rational operations and, at the same time, aim at high-risk innovations; they are “down-to-earth” focused on the present, while simultaneously considering future trends; they exploit that which is available, all the while exploring the undiscovered (Heracleous, 2020).

#### **4. Measuring the Influence of Contradictions**

Advanced analysis of the impact of a paradox mindset on individual and group creativity and performance indicates a void, i.e., a lack of evaluation methods. This was our aim herein, and the source of inspiration was the Paradox Mindset Questionnaire, developed and applied by Prof. Ella Miron-Spektor and her team (Miron-Spektor et al., 2017), who granted us permission to use and modify her questions.

The major challenge was that the original Paradox Mindset Questionnaire consisted merely of positive statements, which may influence respondents through the mechanism of social desirability bias (SDB). In this vein, our decision was to balance the original positive statements with negative (reversed) ones.

Along these lines, in order to investigate how individuals feel about holding conflicting concepts, the Influence of Contradictions Questionnaire (ICQ) was constructed, altering the original questionnaire by blending positive and reversed statements.

##### ***4.1. Questionnaire***

###### ***4.1.1. Discrimination Power***

Initially, a 12-statement questionnaire was constructed and validated in an Anglophonic population ( $n = 120$ ). All statements but 1 and 6 had good discrimination power (see Table 1).

	Statements (randomized order)	Discrimination power	Comments
1	I feel uplifted when I realize that two opposites can coexist	0.126	> 0.3
2	I am comfortable dealing with simultaneous conflicting ideas	0.430	
3	I avoid dealing with conflicting concepts *	0.358	
4	Tension between ideas mentally blocks me *	0.451	
5	Encountering conflicting perspectives makes me confused *	0.315	
6	I often experience myself as simultaneously embracing conflicting concepts	0.208	> 0.3
7	Tension between ideas energizes me	0.451	
8	I feel disempowered when dealing with contradictory issues *	0.473	
9	When I consider conflicting perspectives, I gain a better understanding of an issue	0.305	
10	I feel dejected when I see opposites coexisting *	0.293	
11	I find dealing with conflicting ideas inconvenient *	0.368	
12	I feel energized when I consider addressing contradictory issues	0.556	

\* Reversed.

**Table 1.** The Influence of Contradictions Questionnaire and the discrimination power of the initial 12 statements

After removing questions 1 and 6, the remaining 10 statements were selected for their good discrimination power (see Table 2) and good reliability (Cronbach's alpha = 0.791).

	Statements (randomized order)	Discrimination power
1	I am comfortable dealing with simultaneous conflicting ideas	0.430
2	I avoid dealing with conflicting concepts *	0.358
3	Tension between ideas mentally blocks me *	0.451
4	Encountering conflicting perspectives makes me confused *	0.315
5	Tension between ideas energizes me	0.451
6	I feel disempowered when dealing with contradictory issues *	0.473
7	When I consider conflicting perspectives, I gain a better understanding of an issue	0.305
8	I feel dejected when I see opposites coexisting *	0.293
9	I find dealing with conflicting ideas inconvenient *	0.368
10	I feel energized when I consider addressing contradictory issues	0.556

\* Reversed.

**Table 2.** The Influence of Contradictions Questionnaire and the discrimination power of the final 10 statements (after removing statements 1 and 6)

#### 4.1.2. Factor Analysis

For factor analysis, the rotation varimax method with Kaiser’s normalization was applied. As a result, the statements, when distributed into two categories, were arranged according to the scheme outlined in Table 3.

Statement #	Two-component matrix a	Factor loadings	
		Energy	Cognition
3	Tension between ideas mentally blocks me	0.723	
5	Tension between ideas energizes me	0.692	
6	I feel disempowered when dealing with contradictory issues	0.670	
1	I am comfortable dealing with simultaneous conflicting ideas	0.667	
4	Encountering conflicting perspectives makes me confused	0.572	
2	I avoid dealing with conflicting concepts	0.570	
7	When I consider conflicting perspectives, I gain a better understanding of an issue		0.745
8	I feel dejected when I see opposites coexisting		0.682
9	I find dealing with conflicting ideas inconvenient		0.670
10	I feel energized when I consider addressing contradictory issues	0.394	0.631
a The rotation achieved convergence in three interactions.			

**Table 3.** Factor analysis—two components matrix

The original hypothesis was that the responses would fall into the two categories of “cognition” and “energy” (i.e., action); however, this hypothesis was only partially confirmed by factor analysis, and hence should be verified in a larger sample.

#### 4.1.3. Reliability of the Final Scale

The overall reliability of the scale is shown in Table 4.

Scale	10-statement final scale
Cognition	0.599
Energy	0.697
Total	0.791

**Table 4.** The reliability of the final scale

### 4.2. Results

The final 10-statement scale achieved an overall satisfying reliability of 0.791. Additionally, all 10 statements demonstrated satisfying discrimination power.

The validation process demonstrated that the ICQ is appropriate for scientific purposes, e.g., for comparison between segments of society or types of activities.

## 5. Conclusions

The literature review indicated that the aptitude for embracing contradictions has a multifaceted positive impact on individual and team creativity and effectiveness. Indeed, some authors have indicated that a company succeeds because it creates contradictions and paradoxes in many aspects of organizational life (Takeuchi et al., 2008).

### 5.1. Future Studies

Taking a further step from theory to research, and to be able to measure and compare this propensity, the Influence of Contradictions Questionnaire (ICQ) was developed and validated, becoming a tool ready for use in further comparative studies (e.g., between segments of society or various professions). The ICQ was also developed as a way of measuring managers' and team members' propensity for a paradox mindset, which is a particularly important trait to possess in the business world, as a way to turn the many unavoidable contradictions into benefits, thereby initiating rapid growth.

It would be interesting to trace, in future studies, any possible correlations between the level of paradox mindset and other traits. For example, the conjecture is that people open to embracing contradictions may bear uncertainty more easily and, hence, may have a higher level of ambiguity tolerance (AT) (see: Furnham, 2013; Norton, 2010). Another hypothesis is that openness to contradictory points of view may lead to an understanding of the perspective of the others and, thus, this trait may correlate with one's level of empathy (see: Gerace et al., 2017).

In future studies, the ICQ could be tested within a representative sample ( $n > 1000$ ) of society, as a means to identify a societal index for embracing contradictions. This would provide a societal norm to refer to.

### 5.2. Application

The ICQ may serve as a tool for assessing the organization, team, and individual levels of the propensity for embracing paradoxes (Schad et al., 2016; Waldman et al., 2019). A paradox mindset is highly valued in business, both in coping with adversities (Andriopoulos, 2003; Spreitzer, 2020), as well as in understanding and getting into the headspace of a competitor. Moreover, it may be helpful for identifying future market tendencies (Heracleous, 2020; Heracleous and Robson, 2020).

The ICQ may be especially useful for social entrepreneurs, e.g., in the field of peacebuilding, where one needs to balance both their own and opposite stances. In particular, conflicting parties often need to be psychologically ready to enter and manage a peace process (Rifkind and Yawanarajah, 2019); in this situation, a paradox mindset may enforce one's peacemaking (bipartisanship) propensity and aptitude.

Finally, the propensity for embracing contradictory opinions may be helpful in preparing future leaders to deal with complex challenges (Tian and Smith, 2015), especially if adopted as part of a university's curriculum.

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