SOCIAL MECHANISMS AND HUMAN RESOURCE MANAGEMENT PRACTICES IN CREATIVITY-BASED ORGANIZATIONS

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ABSTRACT: *The aim of this paper is to provide a theoretical and practical background on creativity, clarifying the definitional aspects of the term. It offers evidence of its conceptual categories and answers the following question: How have scientists conceptualized creativity? What concepts should form the essence of creativity? Very few studies have proposed a multi-level model to unlock the black box of creativity. Moreover, as mentioned earlier, in recent years, more and more researchers have defined creativity as a collective process, attempting to understand the underlying mechanisms. However, researchers have largely ignored a specific focus on the mechanisms that enable creativity to occur, as well as a joint exploration of the categories "creation," "outcome," and "interaction." It is also suggested that managers at all levels who wish to encourage creativity and innovation within their organizations should carefully select recruits, evaluating personal characteristics and skills such as creative thinking, imagination, and intuition. They should also create an appropriate environment where these potentially creative individuals can work and collaborate, promoting individual involvement in the creative act and encouraging employees to find better ways to do things. This means that human resource management practices play a crucial role in identifying, attracting, and retaining the best talents.*

KEY WORDS: *creativity innovation, concept, social mechanism, human resource management practice.*

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1. INTRODUCTION

Many researchers have suggested that creativity is very important for the long-term survival of organizations (Devanna & Tichy, 1990) because it allows organizations to remain competitive in a rapidly changing environment and gain a competitive advantage (Amabile, 1988). Competitive advantage depends on the firm's use of existing creativity and its ability to generate new ideas and knowledge more effectively (Oldham & Cummings, 1996).

Although creativity is increasingly recognized as central to competitiveness and has attracted considerable attention, there is still no consensus among researchers on how to define it in terms of what they perceive as its key conceptualization. As Amabile reported, although it is wrong to say that little is known about creativity given the considerable research on the topic, it is still true that we do not know enough to identify a precise, universally applicable definition of the term. Different authors have different views on what should and should not be at the heart of what constitutes ″creativity″. One of the main reasons for these differences is that the contributors to the creativity literature come from different academic backgrounds, giving rise to ambiguous and different definitions of creativity. Therefore, research on this topic is quite difficult to conduct. Hence, the need for greater clarity in the field and the operationalization of the concept.

This chapter attempts to fill the gap in the literature by analyzing academic definitions of creativity and identifying areas of conceptual agreement, providing evidence of its conceptual categories and defining elements. Definitions of creativity are analyzed through a content analysis of 94 definitions of the term, collected from articles published in selected management journals and books from 1990 to 2008.

This investigation makes several contributions. First, by bringing definitional clarity, it provides a theoretical contribution to the creativity literature. Second, it promotes shared understanding between separate streams of research and suggests possible connections. Third, a process of integrating these flows into a whole begins. Fourth, once the conceptual categories of creativity are clarified, it allows further investigation of disciplinary mechanisms and practices.

2. METHODOLOGICAL ASPECTS OF INVESTIGATING AREAS OF CONCEPTUAL AGREEMENT REGARDING "CREATIVITY"

Content Analysis

Definitions of creativity are analysed using content analysis. This methodology is "a research technique for the objective, systematic, and quantitative description of the manifest content of communications". According to Neuendorf (2002), content analysis is a summarizing, quantitative analysis of messages that relies on the scientific method (including attention to objectivity-intersubjectivity, a priori design, reliability, validity, generalizability, replicability, and hypothesis testing) and is not limited by the types of variables that can be measured or the context in which messages are created or presented. As previously mentioned, this type of analysis is used here to provide

evidence about what concepts should form the essence of creativity and what the conceptual categories of creativity are.

This methodology has produced useful results in many different fields. For example, it has been used to determine the presence of certain words, concepts, themes, phrases, characters, or sentences in texts or sets of texts. This technique allows researchers to include large amounts of textual information and systematically identify its properties, such as the frequency of the most frequently used keywords, by detecting the more important structures of its communication content.

Content analysis offers several advantages. Firstly, it allows for a systematic analysis of textual materials by adhering to analytical rules. The material must be analysed step-by-step and is divided into analytical content units. However, the amount of textual information must be classified to provide a meaningful reading of the content under scrutiny. Categories are found and reviewed during the analysis process.

Secondly, this technique has the capacity to be comprehensively inter-subjective, to compare results with other studies in the sense of triangulation, and to perform reliability checks, including both quantitative and qualitative operations. Thirdly, it allows for an approach to the text that can alternate between specific categories and relationships, and also statistically analyses the encoded form of the text. Finally, it provides insight into complex patterns of human thinking and language use, and when well-executed, is considered to be a relatively "accurate" research method.

Data Collection and Units of Analysis

Before adopting content analysis, an exploratory study of the literature was conducted to establish how creativity is defined. The literature review guided the further development of the units of analysis to be considered in the content analysis. The focus was on management resources, and the sources used were diverse, including books, encyclopedias, dictionaries, and academic articles.

The Business Source Complete database was used to collect the articles. This database is the most commonly used research database in the industry, providing full text for more than 2,300 journals, including full text for over 1,100 peer-reviewed titles. An 18-year period, from 1990 to 2008, was covered to include samples from the early stages to more recent studies on creativity. 1990 was chosen as the starting point for the analysis as it marked the beginning of the proliferation of creativity studies in the field of management. In that year, researchers began analysing the contextual factors and environmental variables associated with creativity, conceptualizing the importance of including new elements in the definitions of creativity.

For the content analysis, 462 articles from academic journals and 50 books were analysed. High-prestige journals were selected to ensure that the cutting edge of research was included in the analysis (e.g., Academy of Management Journal, Academy of Management Review, Administrative Science Quarterly, Organization Science). As the analysis progressed, it became clear that other journals also needed to be included, representing a significant portion of creativity studies and being most receptive to creativity research (e.g., Creativity & Innovation Management, Creativity Research Journal).

Articles for the study were chosen by reading the abstract: if, after reading the abstract, there was a question about whether the article included issues of definition regarding creativity, then the full article was read. Articles on creativity were included if they were considered to have academic merit, which operationally meant containing conceptual or empirical content.

Using these criteria, 94 different definitions of creativity were selected, with 69 definitions collected from academic journals (Table 1), 22 definitions from books, and 3 from dictionaries and encyclopedias. The collected definitions represent the units of analysis for the study. They contribute to answering the fundamental question: What is creativity? Broadly, a definition represents the "essence" of an idea, containing its key concepts and critical abstractions.

The following question guided the analysis of the different definitions: What constructs are representative of the concept of creativity? The definitions converge to some extent but also differ in major ways and highlight different dimensions, as will be explained in the following sections.

Table 1 - Academic Articles by Journal

Academic journals	Number of articles
Creativity and Innovation Management	21
Management Academy magazine	13
Academy of Management Journal of Management Analysis	6
Management magazine	4
International Studies of Management and Organization	3
Journal of Organizational Behavior	3
Quarterly Journal of Administrative Sciences	2
Theory and Practice of Entrepreneurship	2
Journal of Creativity Research	2
Organization Science	2
Australian Journal of Management	1
California Journal of Managerial Analysis	1
Harvard Business Review	1
International Development Journal	1
BEHAVIOR	1
Journal of Business and Psychology	1
Journal of Consumer Research	1
Journal of Knowledge Management	1
Journal of Marketing Theory and Practice	1

NVivo2, a software package for qualitative data management, was used to conduct the content analysis. This type of software is called CAQDAS (Computer Aided Qualitative Data Analysis Software) and is widely used in social science research to facilitate the analysis of qualitative data and to make qualitative analysis more reliable and transparent. It is used in many different fields, from sociology to marketing research (Harker, 1999). The basic idea of the software is summarized in Figure 1.

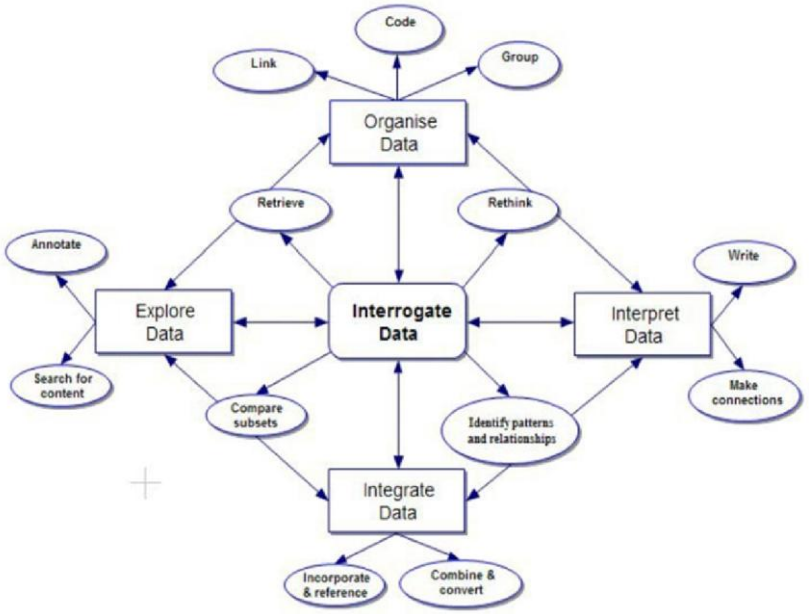

Figure 1. Basic idea of CAQDAS software

NVivo allows researchers to import and code textual data, edit text, retrieve, review, and recode coded data, search for word combinations in text or patterns in coding, and import or export data to other quantitative analysis software (Gibbs, 2002).

In NVivo, ideas and categories are stored in places called "nodes." It is important to distinguish between a code and a node in NVivo terminology. A node is a physical location where you store groups of ideas that should be coded. Therefore, coding (placing items into codes) is a process, a way of labeling certain aspects of the data and sorting the information into distinct categories: "Coding is an essential procedure. Any researcher wishing to become proficient in qualitative analysis must learn to code well and easily. The excellence of research outcomes depends greatly on the excellence of coding".

On the other hand, nodes contain all the information that has been coded under a specific category. As Dey suggests, the categories represented by nodes should reflect the data and serve a specific analytical purpose. Nodes are not just a simple categorization of text passages. Nodes, to a large extent, constitute a focal point for

thinking and interpreting the text. NVivo distinguishes between three ways of storing nodes: free nodes, which are the simplest and appear as a simple list in the program; tree nodes, which represent a hierarchical structure; and case nodes, used for organizing cases. Initially, most will be free nodes, but some may be in a tree structure because they could be derived from an initial theoretical perspective. However, a long list of nodes, especially free nodes, is not very useful. Therefore, it makes sense to move them into a tree where their relationships can be seen more clearly.

Attributes are properties assigned to nodes or documents. In this study, the following attributes were assigned to each document: year, source type, and author. Once attributes are defined, each document or node will have specific values for each attribute. These attribute values can be of numeric type, string, boolean, or date-time. Attributes can be applied usefully for better data management and efficient searches.

NVivo 2.0 was used as a qualitative data analysis technique to synthesize and manage the collected definitions. This software was chosen because it offers a holistic view of the current state of research in the study field and provides a structured approach to content analysis. Moreover, this program made it possible to transform the way data was visualized (from static to dynamic) in a manner that makes the relationships between categories more visible through the use of text formatting and hyperlinks to other documents and categories.

Coding Scheme

Conceptual categories and certain indicative synonyms of the concepts were identified and highlighted by analyzing 94 definitions of creativity. The coding scheme was specifically developed during the analysis, keeping in mind the connection with management. Coding was assigned to both single words (e.g., involvement, collaboration) and meaningful combinations of words (e.g., recombination of elements, divergent thinking, and framework restructuring), maintaining consistency throughout the process.

In the first part of the coding process, 69 free nodes were identified. In a second step, the coded text was reviewed and refined, and the free nodes were grouped into tree nodes, as some of the free nodes were related to each other. Tree nodes contributed to gaining an overview of the conceptual framework. During this process, special attention was paid to maintaining mutually exclusive categories.

Conceptual Categories

At the end of the analysis, six conceptual categories representative of creativity were identified: creation, involvement, interaction, modification, outcome, and synthesis (Table 2).

The total number of coding references is 487. 39% of coding refers to outcome, 32% to synthesis, 19% to creation, 5% to modification, 3% to interactions and 2% to involvement (Figure 2). Although no effort is made here to establish any form of hierarchy of derived conceptual constructs, it can be seen that 90% of the coding includes references to outcome, synthesis, and creation. At first glance, the results presented in Figure 3 suggest some level of consensus on key conceptualizations of creativity.

Table 2. Six Conceptual Categories of Creativity

Primary construction	(Other common constructs)
creation	production, development, generation, materialization, improvisation, realization
Involvement	total involvement
Interplay	communication, social process, collaboration, influence, working together
CHANGE	transformation, change
Result	novelty, originality, utility, opportunity, public recognition
Synthesis	thinking, imagination, knowledge, problem solving, improvement, discovery, intuition, invention, conceptualization

However, the argument that creativity is defined by its key conceptualizations holds only if these concepts are in turn defined by a clear and shared understanding of their core meaning. In the light of this consideration, the following paragraphs will analyze the highlighted categories and the concepts and elements that compete to explain them.

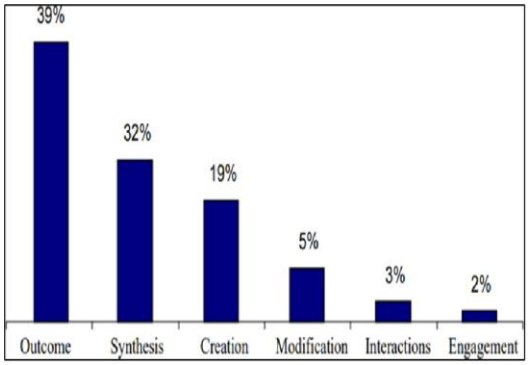

Figure 2 - Number of References by Conceptual Category

3. RESULTS

Researchers seem to agree that creativity is the quality of a product, process, or solution and refers to an outcome produced by a creator. Indeed, 77% of definitions include references to creativity as an outcome. This outcome should be new, appropriate, original, valuable, and useful (Silva & Coelho, 2018) and should produce effective surprise. Couger summarizes the requirements for creative outcomes as follows: first, the outcome has novelty value for the thinker or culture; second, novelty or uniqueness combines with value or utility.

Most current definitions of creativity that fall under the conceptual category "outcome" are product-based definitions, meaning they are based on the creative product rather than the creative process (Unsworth, 2001). The product definition implies that judgments of novelty, appropriateness, and originality refer to a specific

public product rather than to a specific process or person. Although progress has been made in defining creativity as a process, some authors suggest that, ultimately, identifying a process as creative must depend on the fruit of that process: a product, an idea, or a reaction. As Amabile pointed out, even if a constellation of traits characterizing particularly creative people can be specified, identifying the individuals whom such personality research would validate must somehow depend on the quality of their work. Therefore, according to most authors, the definition most likely to be useful for empirical research is the product-based one (deliverables).

Creativity is related to the conceptual category "**synthesis**" in 67% of definitions. "Synthesis" includes all elements referring to the construction of separate elements into a whole/theory/connected system. This category was highlighted with specific reference to creativity in Kruger's work (Kruger, et al., 2004).

To create means to bring into existence, originate, produce, generate, and implement new ideas or solutions, and creation is the act of making something new or the ability to invent something new. 64% of definitions are associated with "**creation**," presenting creativity as the creation, production, development, or generation of a valuable and useful new product, service, idea, procedure, or process (Perry-Smith & Shalley, 2003).

According to 17% of the collected definitions, a product, idea, or procedure can be considered new not only if it involves producing something entirely new but also if it involves either a significant transformation or "**modification**" of existing materials. 13% of definitions refer to the category "interaction," which includes the relational perspective with creative activities. Despite the fact that, compared to the other categories, it is evident that only a few definitions associate creativity with "**interaction**." 6% of definitions link creativity to individual "engagement," with 2% of coding referring to this category. Broadly, engagement can be defined as a positive, fulfilling work-related state of mind characterized by vigor, dedication, absorption, and self-efficacy (Schaufeli & Bakker, 2004; Khatri & Ng, 2000; Agor, 1989; Agor, 1986; West & Farr, 1990).

4. CONCLUSIONS

The purpose of this chapter was to provide a theoretical background and review the specialized literature on creativity to bring definitional clarity to the term. It offers evidence of its conceptual categories and answers the following question: How have scientists conceptualized creativity? What concepts should form the essence of creativity?

Given the numerous definitions provided by researchers, the aim of this analysis was to enhance our understanding of what is agreed upon regarding the definition of creativity. Thus, the results of the examination of 94 definitions collected during the analysis are highlighted, and a content analysis of these definitions was conducted. The results of the analysis show that six conceptual categories are fundamental to defining creativity, namely: creation, synthesis, output, modification, interaction, and engagement. During the coding, the attempt was to keep the conceptual categories mutually exclusive. A detailed examination of the results shows

that 90% of the coding includes references to outcome, synthesis, and creation. Only a few definitions include references to the categories of modification, interaction, and engagement. This consideration opens new research avenues on these less-studied constructs.

Moreover, the results of this chapter also encourage future research to explore together the different dimensions of creativity that emerge from this study. For example, not only aspects related to producing new and original outcomes but also those related to recombining different elements, ideas, or materials, interactions and collaboration between people, and the engagement of individuals. This means that future research should integrate the individual, team, and organizational levels, advancing a multi-level framework.

Very few studies have proposed a multi-level model to open the black box of creativity. Additionally, as mentioned earlier, in recent years, more and more researchers have defined creativity as a collective process, trying to understand the mechanisms underlying it. However, researchers have largely ignored a specific focus on the mechanisms that enable creativity to occur, as well as a joint exploration of the categories "creation," "outcome," and "interaction." It is also suggested that managers at all levels who wish to encourage creativity and innovation within their organizations should carefully select recruits, evaluating personal characteristics and abilities such as creative thinking, imagination, and intuition, and create an appropriate environment in which these potentially creative individuals can work and collaborate, promoting individual engagement in the creative act and encouraging employees to find better ways of doing things. This means that human resource management practices play a crucial role in identifying, attracting, and retaining the best talents. However, very few studies have examined the impact of human resource management practices on employee retention in a creative context.

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