

# **Bricolage: Theoretical and Contemporary Uses of the Concept in Entrepreneurship Studies**

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## **Abstract**

It is essential to have mutual understanding of theories, because their theoretical and contemporary uses change over time. Thus, this paper examines theoretical and contemporary uses of Bricolage theory in entrepreneurship studies. In doing so, it reviews scholarly articles on the theory through a documentary analysis method. Its

findings showed that Bricolage was used across different fields of study. The findings also showed that there are differences between original and contemporary uses of the theory. Similarly, there is change in contextual meaning of the theory. Furthermore, it was noted that the theory was applied to different entrepreneurial phenomena, except certain contexts like entrepreneurial process, entrepreneurship education, and digitalization. This paper makes theoretical contribution by outlining key assumptions of Bricolage and its contextual meanings. It also provides insight for scholars and areas for further research.

## 1. Introduction

Bricolage originates from work of Lévi-Strauss (1966). It denotes making do with current resources. It also refers to creation of something new from little available resources or by combining various limited resources (Baker and Nelson, 2005; Fisher, 2012). It is one of well-known entrepreneurship theories, and it is widely used in various studies (Baker and Nelson, 2005). For example, it was used to investigate entrepreneurship behaviour (e.g. Fisher, 2012), technology development (e.g. Garud and Karnøe, 2003), and social value creation (e.g. Johannisson and Olaison, 2007; Di Domenico et al., 2010; Salunke et al., 2013). The concept was employed in other fields like politics, legal, entertainment, life

science, and education (Baker and Nelson, 2005; Di Domenico et al., 2010). The scholars used the concept both positively and negatively (Baker and Nelson, 2005). With a wide-use of the concept, it is essential to know its origin so that the core meaning of the concept can be upheld and maintained.

Therefore, this paper aims to present the uses of Bricolage, its key assumptions, and application of its theoretical assumption in entrepreneurship studies. Similarly, this paper aims to explore the differences in the theoretical and contemporary uses of the concept in the entrepreneurship studies. Hence, the paper provides answers to these questions: (a) what are the theoretical and contemporary uses of Bricolage in the field of entrepreneurship and others? (b) what are the basic assumptions of Bricolage? (c) how these assumptions were applied in entrepreneurship studies?, and (d) how do theoretical and contemporary uses differ in entrepreneurship studies?

In answering the questions, a documentary method was applied. Scholarly articles in English language were considered. The findings showed that Bricolage has been applied to almost facets of human activities, and fields of study. Thus, the concept was used theoretically and contemporarily. Similarly, the findings showed that “*achieving a goal with whatever available resources*” is still the main assumption of the concept. Additionally, this key assumption was applied to entrepreneurship

phenomena, like new venture creation, technology development, innovation process, and entrepreneurial behaviour. Furthermore, the difference between theoretical and contemporary uses of the concept is that its theoretical use concentrates on “*how to get things done with resources at hand*”, but the contemporary use centres “*on getting things in a specific situation*”. The findings noted that there is a change in meaning of the concept.

In view of the above findings, the paper makes a theoretical contribution to entrepreneurship field. It pinpoints meanings of key assumptions of Bricolage theory. It also outlines differences in the use of the theory and changes in the contextual meaning of the theory. Thus, it provides insight for scholars to know the origin and areas for further discussion on the theory. The paper is structured as follows: methodology, findings, reflections, and conclusion.

## **2. Methodology**

Bricolage is widely used. Thus, to present an extent of its usage, a documentary method was employed. This method was used because it enables scholars to synthesize literary works on a specific topic, and to derive new knowledge from documents or artefacts. Its process are data codification, theme development, and result derivation (O’Leary, 2014; Silverman, 2011; Bowen, 2009). Due to the

limited resources and the scope of this paper, Google scholar was used to collect relevant articles on Bricolage. This domain was selected for its wide-use, and containing of other domains (e.g. Scopus, Web of Science, ScienceDirect, and EBSCOhost etc.). Of course, one of the problems associating with the domain is that it contains many irrelevant papers, and small journals are rampant there. To avoid this problem, the core term of this paper, “*Bricolage*”, was used in searching for the articles. Also, an attention was paid to only scholarly papers, while conference papers and textbooks (including chapter in the textbooks) were excluded. An attention was also paid to the articles in English language because it was noted that the concept emanated from French language; thus, there were several papers in the language.

When the concept was searched on the Google Scholar, as expected, thousands of result were showed. It was noted that these results were according to the relevance of the concept; so, the searching was restrained to the first 10 pages of the domain. From the page 1, the relevant articles were checked by reading abstract, journal, citations, and accessibility (of this paper author) to the article. After checking, the relevant articles were downloaded, read, and annotated. At this stage, all articles which are previously analysed were excluded from the annotation. It was noted that some articles had done literature review on the concept (e.g. Di Domenico et al.,

2010; Duymedjian and Ruling, 2010; Baker and Nelson, 2005). These articles enabled the data analysis.

The annotated articles were analysed by focusing on these criteria: (1) uses of Bricolage, (2) theoretical meaning of Bricolage (which papers cited and reasons for the citation), (3) the article's contextual meaning of Bricolage, (4) field of study, (5) application of the concept in different field, and (6) nature of research (literature review, conceptual or empirical) of the article. Altogether, 38 papers were analysed and the findings of the analysis are presented in the following section. Also, the details of analysed articles are presented in the appendix.

### **3. Findings**

#### **3.1 The Uses of Bricolage**

The theory enjoys popularity, especially in the field of social sciences. Although it originates from anthropology, it is now employed to cognitive sciences, entrepreneurship, information technology (IT/ICT), innovation, and organizational studies. Its main contributions to the organization research, in the past decades, are in form of organizational resilience, sense-making and improvisation, using of technical systems and artefacts, and entrepreneurship (Duymedjian and Ruling,

2010: 133). Likewise, the concept enjoys popularity in these fields: sociological ethnography, political science, women's studies, interpersonal relationships, education, legal studies, evolutionary genetics, biology, and economics (Baker, 2007).

In relation to the above scholars, it was also found that the concept was applied to entrepreneurship studies more than any other fields. The concept was also well-used in the innovation research, which sometimes incorporated entrepreneurship (e.g. Fuglsang, 2010), and ICT (e.g. Ferneley and Bell, 2006). Similarly, the concept was used in organizational and management studies (e.g. Boxenbaum, and Rouleau, 2011). The analysis also revealed that the concept was applied in ethnography, political science, and ICT studies (e.g. Hammersley, 1999; Carstensen, 2011; Büscher et al., 2001 respectively).

Unlike the above scholars, the concept was used in these study areas: qualitative research methodology, natural resource management, design, finance, collaborative planning and policy making, food development, and learning. The most interesting application areas is the use of the concept in the research methodology. There are 4 articles which explain how Bricolage could be used in conducting a qualitative research. Another interesting application area is the use of the concept in the

natural resource management. Logically, the concept seems to be relevant to resource management because “*limitless material resources are not only unavailable most of the time, they may actually be a hindrance. And remaining lean and mean can often be a blessing.*” (Gibbert et al., 2007: 15). Meanwhile, natural resource is known for its abundance. Thus, the application of Bricolage to manage such resource seems to be interesting. Therefore, the use of Bricolage appears to be wide.

Furthermore, most of the analysed articles are conceptual and/literature review. An observed reason for this is that the concept is philosophical, in which the scholars were trying to explain how it could be applied. Another observed reason is that the scholars used the concept in proposing their conceptual solution for their field. For instance, Engelen et al (2010) proposed that Bricolage could be used in solving financing problems; while, Innes and Booher (1999) presented how the concept could assist in developing a collaborative plan and decision making. On the other hand, the empirical articles are mostly associated with entrepreneurship and innovation studies. Only few empirical articles are connected with the ICT, design, and culture. The possible reason for the entrepreneurship/innovation empirical articles is understandable because this field is fond of theory testing and building theory. To sum up the uses of Bricolage, Table 1 provides the details.





**Table 1: The Use of Bricolage**

<b>Field of Study</b>	<b>Article / Scholars</b>
Entrepreneurship	Baker et al (2003), Garud and Karnøe (2003), Baker and Nelson (2005), Johannisson and Olaison, (2007), Phillips and Tracey (2007), Baker (2007), Banerjee and Campbell (2009), Di Domenico et al (2010), Fisher (2012), Halme et al (2012), Desa (2012), Salunke et al (2013), and Desa and Basu (2013).
Innovation	Fuglsang (2010), Fuglsang and Sørensen (2011), Senyard et al (2014), and Wu et al (2017)
Organizational and management studies	Duymedjian and Ruling (2010) and Boxenbaum and Rouleau (2011)
Research methodology	Kincheloe, (2001), Markham (2005), Kincheloe, (2005), and Rogers (2012).
Ethnography	Hammersley (1999), and Markham (2005).
ICT	Büscher et al (2001), Ferneley and Bell (2006), and Deuze (2006)
Political science	Carstensen (2011)
Natural resource management	Cleaver (2002), Sehring (2009), and Merrey and Cook (2012).
Finance	MacKenzie, D. (2003), and Engelen et al (2010).
Collaborative planning and policy making	Innes and Booher (1999)
Food development	Horlick-Jones et al (2007)
Design	Louridas (1999)
Learning	Freeman (2007)

Culture	Russel and Tyler (2005)
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Now, considering the uses of Bricolage from the scholars, it can be deduced that the concept has been applied to almost facets of human activities, and fields of study. However, it was noticed that the concept has not yet applied to visual arts, language learning, and most importantly, entrepreneurial process, and teaching entrepreneurship.

### 3.2. The Key Assumptions of Bricolage

During the article analysis, an attention was paid to the theoretical meaning of Bricolage. This enabled the author of this paper to focus on cited works among the scholars. An observation was noted that almost analysed articles made reference to the theorist works - Lévi-Strauss (1966, 7, and 8). Meanwhile, few scholars like Merrey and Cook (2012) and Büscher et al (2001) did not mention the theorist specifically, but they tried to refer to the theoretical meaning of Bricolage in their texts. With this observation, the following Table 2 was drawn to show the theoretical assumptions of the concept in different fields of study.

**Table 2: The Key Assumptions of Bricolage in the Fields of Study**

Field of study	Theoretical Assumptions
Entrepreneurship	Making do with what is at hand, Recombination of resources for new purposes, Improvisation, Making use

	of redundant resources to solve problems at hand, and Human relation to their environment.
Innovation	Tinkering, Using current resources to create new forms and order from tools and materials at hand, Making do with whatever is at hand by reuse and recombination, Making do by applying combinations of the resources at hand to new problems and opportunities, Doing things differently using resources at hand, and Improvisation.
Organizational and management studies	Doing things with whatever is at hand, and Improvisation.
Research methodology	Employing historiographical, philosophical, and social theoretical lenses to gain better understanding; Developing a social, cultural, psychological, and educational science of complexity; Combination of multiple methodological practices, and empirical materials, perspectives to understand a study, and Juxtaposition of different narratives (interpretive method).
Ethnography	Combination of multiple methodological practices, and empirical materials, perspectives to understand a study.
ICT	Using current resources to create new forms and order from tools and materials at hand.
Political science	Working with one's hands and devious means to achieve one's goal.
Natural resource management	Gathering and applying analogies, and styles of existing institutions, and Interweaving and transforming informal and formal institutions for positive change.
Finance	Improvisation, and Building things according to events.

Collaborative planning and policy making	Making sense of innovative consensus building, and Reasoning.
Food development	Whatever at hand.
Design	Tinkering.
Learning	Piecing together, and Make sensing of learning.
Culture	Making do with whatever at hand by reuse.

From the above Table 2, it can be noted that all the fields denote the concept to be: making do, recombination of resources at hand for a certain purpose (e.g. solving problem, utilizing opportunity, influencing existing institution, understanding phenomenon, managing crisis etc.), improvisation, tinkering, and sense-making. All these assumptions are actually referred to by the theorist himself. This might be the reason for not getting a specific assumption of the theory as Duymedjian and Rüling, (2010) pointed out that:

It is important to keep in mind that, despite the precision of his writing, Lévi-Strauss does not provide a clear definition of bricolage. He expresses and illustrates his ideas through frequent changes in perspectives, addressing as much the process of bricolage as the role of the bricoleur, and drawing on multiple comparisons of bricolage, craft, myth, play, and art. The figure of the bricoleur is developed

through comparison with an opposite figure, the ‘ingénieur’, a term (not easily translated into English) rooted in the historical time and process of the Enlightenment, which conveys an array of notions (including a specific belief in the superiority of rationality and scientific reasoning) related to the French engineering tradition. From our reading, three elements are paramount to understanding bricolage according to Lévi-Strauss: stock or repertoire—his view of the resources used; dialogue—the process of bricolage; and outcome—the nature of its results. (p.137)

When the above quotation and the work of Di Domenico et al (2010), Duymedjian and Rüling (2010), and Baker and Nelson (2005) were juxtaposed, the noticeable key assumptions of Bricolage are:

(a) **Making do with any available resource:** most of the above-listed scholars interpreted Bricolage as doing something with whatever resources (tools, materials, methods, techniques, time, money, etc.) for a particular reason. This assumption was narrated by Freeman (2007) when explaining the work of Lévi-Strauss (1966) that:

The bricoleur, in contrast to the scientist or engineer, acquires and assembles tools and materials as he or she goes, keeping them until they might be used. Each is

shaped in part by its previous application but remains inevitably underdetermined, imperfectly understood, open to manipulation for whatever purpose is at hand. Not only are tools selected according to the bricoleur's purpose, but that purpose itself is shaped in part by the tools and material available. The properties of each—tools, materials, and project—are uncovered in process. (p. 486).

(b) **Recombination or Re-use of any available resource:** many scholars also interpreted Bricolage as re-use of whatever available resources for a certain goal. Many entrepreneurship scholars made use of this assumption as it is shown in the works of Di Domenico et al (2010), Duymedjian and Rüling (2010), and Baker and Nelson (2005). In the fields of culture and ICT, Deuze (2006) quoted Hartley (2002: 22) that Lévi-Strauss (1966) assumed that Bricolage is “the creation of objects with materials to hand, re-using existing artefacts and incorporating bits and pieces.” This assumption is synonymous to improvisation and tinkering, as Baker (2007), Engelen et al (2010), Boxenbaum, and Rouleau (2011), and Senyard et al (2014) explained.

(c) **Combination of any available tools:** this interpretation seems to be common with the scholars from the research methodology, culture, and ethnography. They interpreted Bricolage as a combination of different available

tools or methods or practices to get better understanding of a certain phenomenon. For an example, Rogers (2012) quoted Denzin and Lincoln (1999) that “the combination of multiple methodological practices, and empirical materials, perspectives, and observers in a single study is best understood, as a strategy that adds rigor, breadth, complexity, richness, and depth to any inquiry” (p. 4).

Summarily, the main assumption of Bricolage centres on doing something with any available means instead of searching for needed means. Therefore, Bricolage denote getting things done with whatever available resources.

### **3.3 The Application of Bricolage Theoretical Assumptions in Entrepreneurship Studies**

From the immediate subsection, the primary theoretical assumption of Bricolage is achieving a goal with whatever at hand. But, how has this assumption been applied to the entrepreneurship studies? In order to answer this question, an attention was paid to contextual meanings of the concept during the article analysis. The following Table 3 shows the details.

**Table 3: Application and Contextual Meanings of Bricolage**

<b>Article</b>	<b>Application of Bricolage</b>	<b>Contextual Meaning of Bricolage</b>
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Baker et al (2003)	Investigating existence, channels, and implications of strategic improvisation in knowledge-intensive new businesses.	Network bricolage as a dependence on pre-existing contact networks as the means at hand.
Garud and Karnøe (2003)	Examining the roles of agency in the technology development	Co-development and commercialization of new technology among the stakeholders
Baker and Nelson (2005)	Investigating how entrepreneurs in resource-constrained areas manage to develop new and unique services	Make do with what is at hand; create something from nothing by exploiting physical, social, or institutional inputs that other firms rejected or ignored.
Johannisson and Olaison (2007)	Investigating how people deal with natural disasters - emergency entrepreneurship	Social bricolage is a spontaneous collective effort, means combining and locally—in time and space—integrating chunks of everyday routines according to the events and associated needs that the drama produces.
Phillips and Tracey (2007)	Explaining different discussions relating to institutional theory and strategic entrepreneurship	Making do by applying combinations of the resources at hand to new problems and



Baker (2007)	Presenting how the Bricolage was used in developing a new business.	It is improvisation and it implies reliance on the resources at hand.
Banerjee and Campbell (2009)	Examining “ <i>inventor Bricolage</i> ” or “ <i>reconstruction of technological capabilities</i> ”	Inventor bricolage is recombining the knowledge of inventors on hand to address opportunities.
Di Domenico et al (2010)	Explaining Bricolage in the social entrepreneurship	Making do with limited resources available and creating something from nothing for a social end
Fisher (2012)	Investigating entrepreneurial behaviour	Entrepreneurs create new businesses with limited available resources by taking actions and participating in community engagement for their company growth
Halme et al (2012)	Explaining how Bricolage can be used for innovation activities in large companies.	Intrapreneurial Bricolage is an entrepreneurial activity within a large organization characterized by creative bundling of scarce resources.
Desa (2012)	Investigating how international social entrepreneurs overcome their obstacles.	Bricolage acts as a legitimating mechanism for institutional change.
Salunke et al (2013)	Researching the relationship between sustained competitive	Combination of resources at hand to innovate and stay ahead of rivals.

	advantage and strategic entrepreneurship.	
Desa and Basu (2013)	Studying processes of resource mobilization -- optimization and bricolage on social enterprises.	Bricolage enables social ventures mitigate conditions of resource constraint and occasionally enables the venture to recognize new opportunities to scale up operations and/ or extend its mission.

Drawing upon Table 3, it can be deduced that underneath Bricolage assumption is present in the above studies. Although the scholars applied the concept for different phenomena, the core assumption was evident in their studies. Because innovation is part of entrepreneurship, the scholars from this subset was also examined; unsurprisingly, they applied the main assumption of the concept in their studies like that of entrepreneurship.

### **3.4 The Differences between Theoretical and Contemporary Uses of Bricolage in Entrepreneurship Studies**

According to the subsections 3.2 and 3.3, Bricolage was used in the different aspects of entrepreneurship as well as other fields of study. Likewise, the different assumptions of the concept were explained. Meanwhile, if an attention could pay to

the use of the concept, a couple of differences could be noticed between the original and contemporary uses. The first difference is that the theoretical use focuses on how to get things done with resources at hand; but, the contemporary use focuses on getting things in a specific situation. For examples, Baker and Nelson (2005) used Bricolage to describe how the entrepreneurs manoeuvre their resource predicaments and create new businesses. These scholars, contemporarily, termed the concept as “Entrepreneur Bricolage”. Similarly, Baker et al (2003) employed the concept to the companies on how these enterprises improve their resources through their existing network, and they came up with “Network Bricolage”. These examples show that, despite the fact, the first scholar (Baker) is the same first author, he and his team used the concept to arrive at different contemporary uses, because they focused on a certain issue in each study. This difference is present in the work of Phillips and Tracey (2007) who proposed “Symbolic Bricolage”, Di Domenico et al (2010) who suggested “Social Bricolage”, Halme et al (2012) who presented “Intrapreneurial Bricolage”, Banerjee and Campbell (2009) who explained “Inventor bricolage”, and Johannisson and Olaison, (2007) who applied the concept to the emergency entrepreneurship and developed “Social Bricolage”.

Apart from the entrepreneurship studies, the first difference also appears in other fields as it is noted in the work of Cleaver (2002), Sehring (2009), and Merrey and Cook (2012) for “Institutional Bricolage”, Freeman (2007) for “Epistemological Bricolage”, Innes and Booher (1999) for “Collaborative Bricolage”, and Duymedjian and Ruling (2010) for “Collective Bricolage”.

The second difference is the focus of the core assumption of the concept at the time of use. For instance, if the “Making do” assumption was focused during the use of the concept, the contemporary use seems to be “Improvisation or Tinkering”.

Examples of studies for this difference are Ferneley and Bell (2006) and Wu et al (2017). The last difference is echoed by Duymedjian and Ruling, (2010) when they stated that:

“Research on bricolage in organizations can be summarized from four different angles. In terms of variety, bricolage has been investigated in several theoretical fields such as innovation studies (e.g. Garud and Karnøe 2003), social psychology (e.g. Weick 1993), entrepreneurship (e.g. Baker and Nelson 2005) and information technology (e.g. Ciborra 1992). In terms of levels of analysis, bricolage has been considered as an individual activity (e.g. Weick 1998), as an organizational process (e.g. Ciborra 2002) and as a form of inter-organizational dynamics (e.g. Garud and

Karnøe 2003). In terms of stance, bricolage has mainly been used descriptively as a comprehensive notion to describe ways of doing things, but it has also been given some normative aspects when referred to as a source of resilience (e.g. Weick 1993) or as a way to ‘bolster incremental innovation’ (Ciborra 2002: 51). Finally, in terms of conceptual complexity, bricolage has moved on from its simplest definition of ‘making do’, and the relatively frequent assimilations with improvisation, towards the assertion that ‘bricolage does not imply improvisation’ (Baker et al. 2003: 265) and a much richer definition that emphasizes the nature of the resources at hand and the process of recombining resources for new purposes (Baker and Nelson 2005).” (p.136)

The quotation revealed that there are differences in the use of Bricolage in relation to variety, level of analysis, stance, and conceptual complexity. All these differences seem to contribute to the differences in the meanings of Bricolage. Thus, it can be summarized that differences in the use of Bricolage lead to slight variations in the meaning of the concept.

#### **4. Reflections**

So far, the paper has elucidated the origin, the key assumptions, the uses, and the meanings of the Bricolage from both entrepreneurship studies and others.

Reflecting on these explanations, differences between contemporary uses of the

concept in entrepreneurship and other fields, and changes in meaning of the concept were noted. They are explained below:

### **(a) Difference between Contemporary Uses of Bricolage in Entrepreneurship and Other Fields**

There are different contemporary uses of Bricolage, which led to the differences in the contextual meaning of the concept. Making reference to the Table 3, the first difference between the contemporary content of Bricolage in the entrepreneurship studies and others is that Bricolage was explained on a specific aspect of the entrepreneurship field; while other studies explained the concept on a general overview of other fields. For example, Halme et al (2012) explained “Intrapreneurial Bricolage” as an integral aspect of organizational entrepreneurship, but Freeman (2007) explained “Epistemological Bricolage” as a big concept of philosophy.

Another difference is that the entrepreneurship scholars developed their contemporary content from empirical study, whereas other fields developed their content mainly from the literature review. For example, Johannisson and Olaison, (2007), who developed “Social Bricolage”, arrived at this contemporary from their empirical situation of natural disaster. These scholars used this condition to

develop a new concept “emergency entrepreneurship” and explained their new concept emerged from Bricolage. On the other hand, Duymedjian and Ruling (2010) who used “Collective Bricolage” arrived their contemporary from synthesizing of several scholarly papers.

Furthermore, there are differences in the contemporary use of Bricolage among entrepreneurship empirical studies. It was noted these studies focused on testing of Bricolage concept, and building a new sub-concept of Bricolage. Some empirical studies like Desa (2012), Salunke et al (2013), Desa and Basu (2013), and Ferneley and Bell (2006) tested Bricolage theory. On the other hand, Phillips and Tracey (2007), Di Domenico et al (2010), Halme et al (2012), Banerjee and Campbell (2009), Baker and Nelson (2005), Baket et al (2005), and Johannisson and Olaison, (2007) were building a new conceptual forms of Bricolage theory. This difference is understandable because it is natural for empirical studies to either test a theory or build new one.

### **(b) Changes in the Meanings of Bricolage**

Duymedjian and Ruling (2010) affirm that most of existing literature did well for the application of Bricolage into their various studies, but these scholars notify that the original meaning of the concept is derailed. Thus, these scholars tried to

reconstruct and solidify the concept. In doing so, they came up with two types of Bricolage. According to them, the first type is idea-type and the second is non-ideal type. They explained that that the ideal-type is a configuration of acting, knowing, and an underlying worldview; while non-ideal type is the opposite. When explored their classification, they realized that there is collective Bricolage which consists of familiar and convention-based in relation to interaction and nature of the conventions employed. They pinpointed that the configuration of acting is practice, knowing is epistemology, and underlying worldview is metaphysics. Similarly, they noted that the meaning of Bricolage has three elements: stock (materials), dialogue (process), and result.

In respect to Duymedjian and Ruling (2010) and Table 2 and 3, the original meaning of Bricolage has changed slightly. Although the main assumption or analogy of the concept seems to be the same in the present studies, yet contemporary use and application of the concept to different field of studies changes the core meaning. For instances, Baker and Nelson (2005) argued that the meaning of Bricolage is “resources at hand; recombination of resources for new purposes” (p. 333), Johannisson and Olaison, (2007) defined it as “brings together redundant artefacts in order to compose local responses to problems as they present themselves” (p. 74), and MacKenzie (2003) “Creative scientific practice is



typically not the following of set rules of method” (p. 833). All these definitions are different but their underpin assumptions are the same. For an illustration, they all mentioned stock (materials/method), process, and the ultimate goal of the effort. Additionally, this meaning “using of different tools to analyse certain phenomenon” was prevailing in 1990s and early 2000s. Meanwhile, the improvisation or tinkering, making do, and re-combination of resources meanings of the concept seemed to be prevailed afterwards. This denotes that the meaning of the concept was conceptual in the beginning, while application meaning emerged later. This also denotes that the recent need for resource management, lean manufacturing, cost saving, and internationalization and globalization make “improvisation” meaning widely employed. Therefore, it can be agreed that there is a change in the meaning of the concept, but its core assumption seems to be the same.

Summarily, the above differences and changes in meaning revealed that contextual or applied meanings of Bricolage are somehow different from the original meanings. This is due to wide-use of the concept in the different fields of study. Therefore, it can be deduced that the more a concept is widely used, the higher the possibility of derailing original meaning of the concept.

## 5. Conclusion and Areas for Further Research

This paper has shown that Bricolage is an important theory in the management field. Its wisdom has been tested across the fields. Hence, it is essential to have mutual understanding of the core meaning of the concept has Duymedjian and Rüling, (2010) called for it. This paper tried to provide a literature review on the concept, focusing on the theoretical and contemporary uses. It also provides answers to the question of changes in the meaning of the concept of period of time. The paper shows that Bricolage is widely used in the empirical studies especially for entrepreneurship research. Therefore, it can be concluded that this paper has provided some useful hints on the meaning and key assumptions of Bricolage. It is, thus, calling for comprehensive literature review on the concept so that the core meaning of the concept can be maintained for future researchers.

Besides, this paper has shown that Bricolage is not an obsolete concept because it is still relevant and scholars are keeping applying it across different fields of study, and on the different topics. Thus, this paper calls for exploration of Bricolage in the field of visual arts, language learning, and teaching entrepreneurship. This exploration may shed more light on the efficiency and relevance of the concept in these proposed study areas. Similarly this calls for exploration of the concept in relation to similar concepts like Effectuation and Lean startup. Although Fisher

(2012) explored both Bricolage and Effectuation, a wide application of both in different contexts would provide more understanding on the entrepreneurship theories. Similarly, exploration the concept in modern contexts like commercialization and digitalization as Gbadegeshin and Heinonen (2016), and Gbadegeshin (2018) did for Lean start-up respectively would add value for Bricolage theory.

Lastly, in spite of contributions of this paper, it has limitations. Its literature review is restrained to few pages of Google Scholars. Likewise, it excluded textbooks, textbook chapters, and conference papers. Similarly, many domains were not used. All these restraints create limitations for the paper and they hinder its generalisation. However, these restraints create a research opportunity for the future studies. For example, future literature review can include restrained sources, and examine papers from 1968 upwards so that a comprehensive result can be arrived.

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## Appendix

No	Article	Journal	Field of study	Use of Bricolage	Nature of Research	Previous articles used
1	Innes and Booher (1999)	Journal of the American Planning Association	Collaborative planning and policy making	Bricolage is a form of reasoning	Conceptual	Levi-Strauss (1966)
2	Louridas (1999)	Design Studies	Design	Design as bricolage	Conceptual	Levi-Strauss (1966)
3	Hammersley (1999)	Journal of Contemporary Ethnography	Ethnography	Research methodology	Conceptual	C Levi-Strauss (1966: 17); Lincoln and Denzin
4	Kincheloe, (2001)	Qualitative Inquiry	Research Methodology	Bricolage recognizes the dialectical nature of the disciplinary and interdisciplinary relationship and promotes a synergistic interaction between the two concepts	Conceptual	Lincoln and Denzin (2000), Levi-Strauss (1966)
5	Büscher et al (2001)	Computer Supported Cooperative Work	ICT	Bricolage as a method for a situated designing	Empirical	





6	Cleaver (2002)	European Journal of Development Research	Natural Resource Management	Intellectual bricolage	Conceptual	Douglas (1987)
7	Garud and Karnøe (2003)	Research Policy	Entrepreneurship	Co-development of new technology	Empirical	Dorf and Sabel, (1998).
8	Baker et al (2003)	Research Policy	Entrepreneurship	Network bricolage as a dependence on pre-existing contact networks as the means at hand	Conceptual	
9	MacKenzie (2003)	Social Studies of Science	Financial Economics	Creative scientific practice is typically not the following of set rules of method	Conceptual	Levi-Strauss (1966)
10	Baker and Nelson (2005)	Administrative Science Quarterly	Entrepreneurship	Resources at hand; recombination of resources for new purposes,	Literature review / Conceptual	Levi-Strauss (1967), Ciborra, (1996), Campbell, (1997), Stark, (1996), Lanzara, (1998) Hatton, (1989; 1995), York (Maira, 1999), Jacob, 1977; Duboule and Wilkins, 1998), Chao, 1999) ive" (Hull, sation (Weick,



						1993a; Miner, Bassoff, and Moorman, 2001)
1 1	Kincheloe (2005)	Qualitative Inquiry	Research Methodology	Bricolage is developing a social, cultural, psychological, and educational science of complexity	Conceptual	Levi-Strauss (1966) Lincoln (2001), Pinar (2001), and McLaren (2001)
1 2	Russel and Tyler (2005)	Childhood	Culture	refer largely to the ways in which consumer goods can be subject to a range of uses and meanings, particularly within the context of subcultural styles	Empirical	Levi-Strauss (1966), Hebdige, (1979), de Certeau (1984)
1 3	Markham (2005)	Qualitative Inquiry	Methodology / Ethnography	Bricolage as Interpretive Method	Conceptual	Richardson (1995), Rambo-Ronai(1995), Joyce (1998), Tyler (1986)
1 4	Ferneley and Bell (2006)	Technovation	Innovation / Entrepreneurship / ICT	Improvisational approach	Empirical	Cited similar authors above plus: Mintzberg, 1994
1 5	Deuze (2006)	The Information Society	Culture and Social Media	Bricolage incorporates practices and notions like borrowing, hybridity, mixture,	Empirical	Hartley (2002), Chandler (1998)



				and plagiarism		
1 6	Phillips and Tracey (2007)	Strategic Organization	Entrepreneur ship	Making do by applying combinations of the resources at hand to new problems and opportunities’.	Conceptual	Martens et al., 2006) and storytelling (e.g. Hjorth and Steyaert, 2004
1 7	Johanniss on and Olaison, (2007)	Review of Social Economy	Entrepreneur ship	Social bricolage.	Literature review / Conceptual	Levi-Strauss (1966)
1 8	Baker (2007)	Journal of Business Venturing	Entrepreneur ship	Resources in play;	Conceptual	As previously cited and these: Dumont, 1996), Denzin and Lincoln, 1994; Katovich, 1995; Weinstein and Weinstein, 1991, Conville, 1997, Tushnet, 1999, Rynes and Trank, 1999, Hirabayashi and Kasai, 1993; Jacob, 1977; Lavorgna et al., 2001
1 9	Freeman (2007)	Administration and Society	Learning	piecing together; make sensing of learning	Conceptual	Levi-Strauss (1966)



20	Horlick-Jones et al (2007)	Health, Risk & Society	Food development	learning and making sense	Conceptual	Irwin et al. 1996; Levi-Strauss (1966: 17)
21	Sehring (2009)	Water Alternatives	Natural Resource Management	Institutional Bricolage	Empirical	Levi-Strauss (1968), Cleaver (2002), Galvan (2004).
22	Banerjee and Campbell (2009)	R&D Management	Entrepreneurship	Inventor bricolage	Conceptual	Cited many scholars in innovation and entrepreneurship.
23	Di Domenico et al (2010)	Entrepreneurship Theory and Practice	Entrepreneurship	Making do with what is at hand	Literature review / Conceptual	As Above and: Baker & Nelson, 2005; Garud & Karnoe, 2003; Johannisson & Olaison, 2008, Rao et al. (2005); Spencer et al., 2005; Miettinen and Virkkunen (2005) Cunha, 2004), Kamoche et al., 2003
24	Duymedjian and Rülting, (2010)	Organization Studies	Organization studies	an analogy to shed light on the processes underlying mythical thought	Literature review/ Conceptual	As other conceptual papers plus: Orlikowski (2000), Coutu 2002), Schön and Wiggins's (1992)



25	Fuglsang (2010)	Journal of Innovation Economics & Management	Innovation / Entrepreneurship	Innovation as Bricolage	Empirical	Levi-Strauss (1966)
26	Engelen et al (2010)	Economy and Society	Finance	improvisation	Conceptual	Nicholas Hildyard (2008), MacKenzie (2003) Levi-Strauss (1966); Ciborra (2002)
27	Boxenbaum, and Rouleau. (2011)	Academy of Management Review	Management	improvisation	Conceptual	Bryant & Lasky, 2007; Denzin and Lincoln, 1994; (Lowe, Moore, & Carr, 2007
28	Carstensen (2011)	European Political Science Review	Political Science	Bricolage as an alternative vision of agency in ideational change	Conceptual	Levi-Strauss (1966), Campbell, (2004, 2005), Milner (2007)
29	Fuglsang and Sørensen (2011)	The Service Industries Journal	Innovation	'bricolage' - as a 'do-it-yourself'	Conceptual	Levi-Strauss (1966); Styhre, 2009; Timmermans & Berg, 1997
30	Merrey and Cook (2012)	Water Alternatives	Natural Resource Management	Institutional Bricolage	Conceptual	



31	Fisher (2012)	Entrepreneurship Theory and Practice	Entrepreneurship	Make do with what is at hand; create something from nothing	Empirical	Baker and Nelson, (2005), Senyard et al (2009)
32	Halme et al (2012)	Journal of Management Studies	Entrepreneurship	process of bricolage through which people use and combine the various resources they have 'at hand' as means of finding workable approaches to problems and opportunities	Conceptual	Lévi-Strauss, 1966 and many above like Baker, Duymedjian and Rüling, (2010), Di ...2010,
33	Desa (2012)	Entrepreneurship: Theory & Practice	Entrepreneurship	Bricolage as a mechanism of institutional transformation	Empirical	Cited many of above scholars
34	Rogers (2012)	The Qualitative Report,	Methodology	Meaning-making Bricoleurs	Conceptual	Cited scholars in methodology
35	Desa and Basu (2013)	Strategic Entrepreneurship Journal	Entrepreneurship	Bricolage	Empirical	Cited many scholars in innovation, entre.
36	Salunke et al (2013)	Journal of Business Research	Entrepreneurship	Combining resources at hand to innovate	Empirical	Baker and Nelson, (2005), Di Domenico et al., (2010), Baker (2007), Haugh, & Tracey (2010), Katila & Shane, 2005).
37	Senyard et al (2014)	Journal of Product Innovation Management	Innovation	Defined as making do by applying combinations of the resources at hand to innovation	Empirical	Cited scholars in innovation and entrepreneurship
38	Wu et al (2017)	Journal of Business Research	Innovation	Bricolage effects on two critical new-product advantages	Empirical	Cited almost above scholars

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