Introducing Archetype Theory to Information Systems Research: A Literature Review and Call for Future Research

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Abstract. Studying organizational configurations on the one hand and the dynamics of organizational change on the other hand are dominant topics of interest in the information systems (IS) discipline. Studies in each of these research streams take advantage of various well-established theoretical lenses from reference disciplines such as management science. In this study, we take a closer look at archetype theory, which combines these two research streams and which eventually provides a dynamic perspective on organizational configurations. Through a literature review, this study provides a comprehensive understanding of archetype theory (i.e., its constitutive constructs and assumptions) as well as on its application in studying dynamics of configurations. In introducing archetype theory to IS research, we discuss the explanatory power of the respective theory for investigating IS phenomena as well as the methodological and theoretical implications of employing the theory in IS research.

Keywords: Archetype Theory, Literature Review, Change, Configuration

1 Introduction

Investigating configurations has long been central to management research [1-3] as well as to information systems (IS) research [4, 5]. Respective studies seek for patterns, classifications, and sets of structures that differ in their fundamental characteristics and that are effective under different circumstances [e.g., 3, 6]. Such configurations have been researched for IS governance [e.g., 4, 7, 8], ERP implementation [e.g., 9, 10], inter-organizational IS [e.g., 11], among others. However, as fast-moving change has become the natural mode of organizational life [12], the existing *static and deterministic view* on configurations would not appropriately account for the dynamics of change in a turbulent environment [6]. Consequently, configurations should also be examined from the *perspective of change* as they emerge from the dyadic, dynamic interactions between organizations and their ever-changing environment [6, 13].

In the extant IS literature, scholars dominantly examined *either* configurations [e.g., 4, 5, 7, 11], *or* dynamics of change [e.g., 14, 15-17]. As the use of proper theoretical lenses guides scholars in both theory building and theory testing in IS research [18-23],

in this study we promote the use of archetype theory as a purposeful theoretical lens to *simultaneously* study configurations and dynamics, i.e., the configurations that result from dynamics of change. Compared to other frequently used reference theories in IS, such as institutional theory [24, 25], *archetype theory* has not gained recognition in IS research.

After generating their theory on the information technology (IT) function in organizations, Guillemette and Paré [26] in the discussion of their resulted insights state that the lens of archetype theory guides theory-driven investigation of configurations and their inherent dynamics, thus opens new avenues for studying various IS phenomena. As such, with the goal of introducing archetype theory to IS research and commencing preliminary discussions on its implications in IS research, in this study we seek for (i) providing a comprehensive understanding of archetype theory and its underlying analytical constructs and assumptions, and (ii) reviewing how and for which purposes extant research has applied archetype theory. Therefore, compared to existing reviews in management research that focus on archetypes in, for instance, professional service firms [27, 28] and sports organizations [29], the focus of our review is the theory itself and its applications. To this end, our study uncovers the explanatory power of archetype theory in investigating a wide range of IS phenomena, since it caters an in-depth and profound understanding of the underlying mechanisms of change as well as the configurations resulting from change. Finally, we discuss methodological and theoretical implications of employing archetype theory for IS research.

2 Archetype Theory

The identification of optimal configurations and their dynamics have long been the focus of research in management studies [30]. Research on this topic evolved through three schools of thought, namely gradualist, contingency, and structural adjustment paradigms [31]. During the development of the classical management theories in 1950s, academia believed in "one best way" to structure organizations [32]. The *gradualist paradigm* consequently propagates evolutionary approaches [33], similar to Darwin's model of evolution and is reflected in, for instance, lifecycle and maturity model metaphors. Due to neglecting the context in which configurations are embedded, this initial understanding was challenged by other theorists [41], focusing on the contextual factors, which ultimately lead to the *contingency paradigm*. The latter brings a central argument to the forefront of configuration research: "the external circumstances that produce particular organizational designs, and the idea that there is an appropriate linkage between the external, the internal, and performance" [32, p. 400]. Later, institutional theory adds to the contingency paradigm by revising the linkage of internal and external contingencies and performance through a stronger focus on institutional pressures [32]. As such, organizations are understood as reflections or responses to rules, beliefs, and conventions in their surrounding environment [34]. However, organizations have been evolving differently, even when exposed to the very same institutional pressures [35]. Theories of the *structural adjustment paradigm* thus focus on the dynamics of organizational adaptation and explain the movement between

different organizational configurations in the same organizational context. In this paradigm, configuration theory has been influential in taking punctuated equilibrium assumptions (i.e., necessity of ongoing fit between contingency factors and configuration parameters) and in considering a significant number of contingencies resulting in rich descriptions of optimal configurations [36]. Configuration theory posits that configurations can be determined through typologies, taxonomies, and archetypes [27]. As the notion of archetype in configuration theory tries to not only consider optimal configurations but also the underpinning mechanisms that bring about these configurations, it has further been recognized as archetype theory[1]. This theory comprises two key aspects: (i) the *exploration of organizational archetypes* as well as (ii) the *analysis of change*. The following sub-sections describe these aspects in detail.

2.1   Exploration of Organizational Archetypes

Greenwood, Hinings, and Laughlin [35, 38, 39] elaborated the concept of optimal configurations through the notion of archetype and archetype theory respectively. According to archetype theory, an archetype comprises the twin concepts of *interpretative scheme* and *structural arrangement*:

The *interpretative scheme* describes an organization's conception on what it should be doing, how it should be doing, and how it should be judged. This conception is shaped by the prevailing set of ideas, beliefs, and values [38]. The *structural arrangement* implements and reinforces the ideas, beliefs, and values through establishing organizational structures and processes that reflect the respective beliefs and values [38]. Thus, there is a strong interrelation between the interpretative scheme and the structural arrangement as they reinforce each other.

In an ideal case, organizations will evolve towards a situation of organizational *coherence*, where the structural arrangement and the interpretative scheme represent an "appropriate design for adequate performance" [38, p. 295]. As such, in the coherence situation, interpretive scheme and structural arrangement are in line with each other and represent a specific archetype. However, neither do all organizations change in the same way nor will all of them reach a level of high performance. Thus, the analysis of change is an integral part of archetype theory, for which the concept of *change tracks* has been applied.

2.2   Analysis of Change

The identification of archetypes is a preparatory step for the explanation of change. By the identification of the archetype, an organization is situated in one of the following *positions* [38]:

1. *Archetype coherence*, where the interpretative scheme and structural arrangement match and thus reflect and reinforce each other.

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[1] Theorists introduced archetype theory both as a subordinate of configuration theory [27] and as a synonym of configuration theory [37].

2. *Embryonic archetype coherence,* where some design elements are discordant as interpretative scheme and structural arrangement do not perfectly match.
3. *Schizoid incoherence*, where organizations show the presence of two different archetypes at the same time and thus competing interpretative schemes and structural arrangements.

To explain the actual change process, archetype theory outlines the movement of organizations along the abovementioned positions through the concept of *tracks* [38]:

1. *Track A - Inertia:* Most organizations will stick to one archetype for a lengthy period of time. This track describes a situation of archetype coherence with incremental changes, where only slight structural adjustments within a particular archetype can be observed.
2. *Track B - Aborted excursion:* Here, organizations shift from a position of archetype coherence towards an embryonic archetype coherence and back to archetype coherence.
3. *Track C - Reorientation:* Describes the typical transformation situation, where organizations move from an archetype to another. This includes fundamental changes in both the structural arrangement and interpretative scheme.
4. *Track D - Unresolved excursion:* Describes a failed change process. The organization is trapped between two competing archetypes.

Relying on archetype theory's focus as well as on its well-defined constructs and relations, it has a considerable potential to help scholars understand the dynamics of change and its resultant configurations (i.e., archetypes) in IS research. The concept of organizational coherence considers both, tangible artifacts such as structures and processes but also intangibles such as values and beliefs. It also acknowledges the role of dynamics of change by defining multiple change tracks. Therefore, it is worthwhile analyzing how archetype theory has already been applied and, more specifically, how configurations and change have been examined through this theory in the extant literature.

3   Research Method

Despite its potential, archetype theory has not gained much attention in IS research yet [31]. We therefore opt for a literature review, which is considered suitable to identify potential implications for prospective research [40]. This section describes how we identified and analyzed the relevant literature.

3.1 Literature Selection and Review Process

In order to identify prior research relevant to archetype theory, we searched for articles, containing "archetype theory"[2] in either the title, abstract, or keywords. To extract high-quality contributions, we limited our search process on scientific databases to peer-reviewed, scholarly journals (with no limitation on the publication date and the type of journal) and excluded other types of publications (e.g., books, projects, conference proceedings). We identified the related articles by scanning Business Source Premier as well as ProQuest scientific databases. The goal was to cover a wide range of research disciplines, including IS. Not surprisingly, we did not find any journal article in IS, we thus extended the search process and further included AIS-supported conference articles in IS, which were retrieved from the AIS Electronic Library.

We subsequently went carefully through the abstracts of all articles and excluded those that were not relevant (see **Table 1**).

Table 1. Search and selection process of the literature review

Database	Business Source Premier	ProQuest	AIS Electronic Library
Search Term	"archetype+theory" IN title OR abstract OR keywords		"archetype+theory"
Filter	Only look for scholarly journals		none
# of articles found *(total: 42)*	7	34	1
# of articles excluded and reasons for exclusion *(total: 26)*	• Article has no relation to archetype theory according to abstract (10 articles) • Article is referring to "jungian archetype theory", which is different than the archetype theory in management science (9 articles) • Article is a book review (1 article) • Article is written in other languages than English (1 article) • Article is a seminal article on archetype theory (5 articles)		
# of articles considered for review *(total: 16)*	16 application articles that employed archetype theory as a theoretical lens in investigating their phenomena of interest.		

We also differentiated seminal articles (contributing to the seminal assumptions and constructs of archetype theory) from application articles (applying assumptions and constructs of archetype theory to their phenomenon of interest). Seminal articles are used for the construction of the analysis framework, which is described in the following section. We used the analysis framework to code the application articles to gain insights on how scholars applied archetype theory in their respective research.

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[2] It is noteworthy that we did not search for the term "archetype" alone or other relevant terms such as "configuration" and "gestalt" [41]. This is due to the focus and scope of our research in reviewing archetype theory itself and its applications, not in identifying the derived archetypes or configurations in the extant research.

3.2 Analysis Framework

Following the guidelines of Webster and Watson [40] and Fettke [42], we developed an analysis framework to guide literature analysis. This analysis framework comprises the *constructs* of archetype theory (as introduced in Section 2) as well as further components to gain insights on how archetype theory has been *applied*. The constitutive components of the analysis framework are:

Use of the theory: Archetype theory can be used to explore archetypes and/or to analyze change. We classified, whether new archetypes are explored and whether changes are analyzed based on archetype theory. This helps us gain insight into the purposes archetype theory is dominantly used for.

Exploration of the archetype: This component of the analysis framework aims at identifying how archetypes have been described. We therefore extracted all the proposed archetypes along with the respective interpretive scheme and structural arrangement of each archetype.

Change: Explaining the dynamics of change is one of the fundamental premises of archetype theory. Therefore, this component of the analysis framework captures the core findings of articles on change, particularly with regard to different types of change tracks.

Research method: In order to capture the dynamics of archetypes, researchers need to employ appropriate methods to investigate structural arrangements and, even more challenging, interpretive schemes. This will support future research in selecting appropriate research methods. Therefore, in the analysis framework, the employed research methods are classified into conceptual, quantitative, and qualitative methods and the corresponding techniques have been captured.

Level of analysis: With this component of the analysis framework, we aim at understanding whether archetype theory is more suited for any particular level of analysis. We distinguish between department (e.g., financial department), organization (e.g., a particular company), industry (e.g., law advisors), and sector (e.g., professional service firms) levels of analysis.

Complementary theory: If archetype theory is used in combination with any other theory, such observations are noted down in this component of the analysis framework. This helps us understand relevant theories that can be used as complementary to archetype theory.

After developing the analysis framework, we coded the extracted articles based on the analysis framework[3].

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[3] The summary of the coding is available for download under http://bit.ly/2f4cJPn

4 Results

The analysis of the extant literature resulted in identifying 16 articles in which archetype theory has been employed [27-29, 31, 43-54][4]. This section presents the major findings of our review in line with the previously introduced analysis framework.

As shown in **Table 2**, the reviewed articles proposed different archetypes. However, some pairs of comparable archetypes (e.g., bureaucratic and managerial archetypes) are frequently used in different articles and only about half of the articles proposed new or substantially modified existing archetypes. Therefore, the identified archetypes are representative for similar situations and can be re-used in other studies. Further, according to the use of the theory, 13 of the articles are concerned with the analysis of change. The latter is an indication that although identification of archetypes is a considerable contribution per se, they are mainly used to better understand the dynamics of change in organizations. We have also observed that at least two different archetypes are identified in each of the reviewed articles. This observation is related to the fact that change is mainly associated with a movement between archetypes.

Table 2. Purpose of theory use and employed research methods in the reviewed articles

Category			Reference	# of articles[5]
Purpose of theory use	*Exploration of Archetypes*	Managed Professional Partnership / Managed Professional Business	[43, 44]	2
		Bureaucratic / Managerial	[45-47]	3
		Kitchen Table Boardroom / Executive Office	[29, 49, 50]	3
		Others	[27, 28, 31, 48, 51-54]	8
	Analysis of change		[31, 43-54]	13
Research Method	*Conceptual*	Literature Analysis	[27-29]	3
	Qualitative	Semi-Structured Interviews	[31, 45-48, 50, 51, 53, 54]	9
		Secondary Source Analysis	[31, 45-48, 50, 52, 53]	8
		Meeting Observation	[48, 54]	2
	Quantitative		[43, 44]	2

4.1 Organizational Archetypes

By comparing the archetypes investigated in the reviewed articles, we were able to identify patterns of how archetypes are typically described. It is out of scope of this

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[4] Literature analysis uncovers 5 *seminal* articles of archetype theory [35, 38, 39, 55, 56], which are used to develop our analysis framework. The derived analysis framework is used to analyze 16 *application* articles.

[5] The same article may be assigned to multiple categories. For instance, Haki & Legner [31] applied qualitative research through semi-structured interviews and secondary source analysis.

article to describe each particular archetype in detail[6]. We rather aimed at explaining how archetypes have been described in the reviewed articles to eventually synthesize how archetype theory can actually be applied. In line with the analysis framework, we distinguish between the structural arrangement and the interpretive scheme of archetypes.

Structural Arrangement: In order to describe the structural arrangement, the work of Cooper et al. [55] is often a starting point in the reviewed articles [44, 46, 54, 55]. Cooper et al. posit that structural arrangement can be defined through both *structures* and *systems*. *Structures* are generally classified by considering the degree of differentiation and integration. Differentiation has been identified through, for instance, considering the level of specialization amongst teams [28] or through the range of different disciplines within organizational entities [48]. Integration is considered to be expressed by the location of the decision power [49], the information flow [55], and the degree of commonly applied rules and procedures. *Systems*, here mainly to be understood as processes, are generally classified into strategic control, marketing control, financial control, and operating control. Reviewed articles propose to measure strategic control through, for example, the degree of strategic freedom of different organizational entities [43, 44]. Marketing and financial control can be observed by the tolerance regarding financial and marking targets [43], compensation systems, and systems for performance appraisal [46]. Operating control finally may be expressed by the degree of centralization of control and information systems [46].

Interpretative scheme: Less consistent are the descriptions used for the interpretative scheme. This is due to the fact that intangibles (such as values and beliefs) are much more difficult to define and measure than tangibles (such as an organization's structure). For instance, in order to distinguish between "partnership" and "managed" archetypes, authors looked at the perceived purpose of an organization, also described as an organization's "raison d'être" [54]. For partnership, this is often the exchange of knowledge with peers, whereas for managed organizations this would be the increase of productivity [43, 44]. As another example, for sport organizations, differentiation has been made between their degree of professionalism in terms of their target definition (e.g., sport as a leisure activity vs. sport as a profession) [29]. Other scholars also differentiated different interpretive schemes along the underlying principles when taking decisions, for example regulation-oriented versus efficiency-oriented decision making principles [45, 46].

4.2   Change

Since the concept of change tracks is an integral part of archetype theory, prior to our review we expected that the articles to take up and refer to this concept [38]. Surprisingly, we identified only few articles [49, 54, 55] that explicitly distinguish between change tracks as explained in Section 2. Instead, Liguori [47], for example, employs a rather basic construct of change tracks and distinguishes between incremental and radical changes. Incremental changes are considered as modifications

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[6] Brock [57] provides detail specifications of the identified archetypes in the literature.

of the structural arrangements only, whereas radical changes also involve changes in the interpretative scheme. This conception is confirmed by the other authors, highlighting the crucial role of the interpretative scheme in change processes [44, 46]. It is noteworthy that Kirkpatrick & Ackroyd [52] demonstrate, how change does not necessarily lead to a new archetype but may also be reflected in an adjustment within the current archetype. Therefore, change can be examined through both adjustment within an archetype and movement between different archetypes.

Further, instead of focusing on the change process as such, authors were interested in understanding why and how a change process is initiated. Authors understand change of the archetype as a reaction to environmental and contextual pressures, which are filtered by organizations through an internal process of interpretation and attribution of meanings [47, 52]. Frequently given examples for such pressures are globalization [28, 44, 52], (de-)regulation/change in government policy [28, 44, 52], change in client needs [44], technological progress [52], as well as capacity for action in terms of both technical and managerial/leadership capabilities [47].

4.3   Research Method, Level of Analysis, and Complementary Theories

In this section we describe the employed research methods in the reviewed articles followed by a discussion of the level of analysis and complementary theories. The majority of the reviewed articles employed *qualitative* research methods and case study research in particular (see **Table 2**).

In case studies, semi-structured interviews, and the review of secondary sources, such as documents, reports, presentations, and media articles were common to identify archetypes and/or changes among archetypes. Indicators for the structural arrangement were, for example, the degree of integration expressed by the decision power of the headquarter [28]. The interpretative scheme was, for example, assessed by capturing the underlying principles during the decision making process [46, 47]. In addition, two articles identified the observation of meetings as an appropriate technique to extract values and decision making processes [48, 54].

Change was identified in two different ways: Either by comparing different cases at a single point in time, or by carrying out longitudinal case studies. The decision for either of the two options is thereby depending on the underlying research question. Liguori [47], for example, was interested in why similar organizations react differently to the same kind of change, whereas Carter and Mueller [48] were interested in the change process of one organization between two archetypes. This implies that whenever the dynamics of change of one particular organization are of interest, longitudinal studies are more appropriate.

Conceptual research was only conducted in articles focusing on rather abstract research topics such as ideal types of governance [27] or synthesis on archetypes described by the other authors [29].

Concerning *quantitative* methods, only two articles applied archetype theory through a quantitative research design [43, 44]. Both articles aimed at examining change of archetypes in different groups of professions (architects and law firms). To this end,

they did so by taking two already defined archetypes and assigned the organizations to one of them based on the answers received in a questionnaire.

The reviewed articles investigated archetypes and change, on different *levels of analysis*. Three articles focused on the department level, for instance, the departments of local government and change in the accounting system [45-47]. Two articles focused on single companies and were classified as research on the level of organization [31, 48]. The majority of the reviewed articles examined archetypes and change on the industry level. Two conceptual articles also focused on the sector of legal advisors and auditors [27, 28].

Besides the employed research methods and the level of analysis, we were also interested in identifying *theories* that were used complementary to archetype theory. We consider configuration theory (more precisely, the typology and taxonomy aspects) as well as agency theory to be relevant, because they were used in the reviewed articles to facilitate exploration of archetypes and explanation of change in archetypes. Harlacher und Reihlen [27] employed configuration theory to identify governance taxonomies and compared them with existing archetypes in the literature. Pinnington [44] employed agency theory to better explain change in archetypes. The use of agency theory helped Pinnington [44] explain changes in the decision making system (structural arrangement) for cases, where the ownership of organizations has changed [44]. According to agency theory, control mechanisms are intensified in cases, where the ownership and the management of the same organization are separated (e.g., shareholder vs manager). This may lead to a change in archetypes because not only the structures but also the values are changed.

5   Discussion

This article starts with the premise that the study of configurations should account for the underlying change mechanisms that bring about the creation or emergence of the respective configurations. As such, the simultaneous study of change and configurations results in profound insights on the dynamics of configurations, their development in a series of change events, and eventually gives meaning to their aspects and specifications.

IS scholars have been striving to explain change and proposed a variety of approaches to identify optimal configurations. To this end, various theoretical lenses have been employed to study change (e.g., evolutionary/Darwinian approach) and optimal configurations (e.g., contingency theory). Relying on the constitutive constructs and theoretical premises of archetype theory, this theory provides a theoretically sound basis to not only explain changes but also to explore configurations. Therefore, it can be employed in studying various IS phenomena in which identifying configurations and explaining the underlying change mechanisms are central. To elaborate the employment of the archetype theory and its contributions in prospective IS research, we provide two exemplary implications on both research streams namely, optimal configurations and change:

The study of optimal configurations is quite dominant in, for instance, IT governance. As pointed out in a literature review on IT governance by Brown and Grant [58], the extant literature has been dominated by either configurations of IT governance [7, 59, 60] — introducing centralized, decentralized, and federal governance modes — or by contingency factors influencing IT governance structure [8]. Nevertheless, existing studies mainly prescribe optimal IT governance structures while the underlying mechanisms that bring about these structures remain obscure. Therefore, the promoted lens of archetype theory proposes a dynamic, non-deterministic approach to explain how and why different IT governance structures arise. It also brings up the possibility of establishing different IT governance structures under the same organizational contingencies and further explains how this non-deterministic process is as such. Moreover, concerning the change stream of research, extant research gives rise to the nature of IS change so that change is not solely or even mainly incremental and cumulative, but rather is episodic and punctuated [61, 62]. These studies mainly lay emphasis on explaining change mechanisms while the emerged configurations form this dynamic process is of outmost interest for different IS phenomena. As such, the explored relation between change processes and the emerged configurations can not only give rigorous meaning to the dynamics of configurations and their occurrence, but also explore typological configurations that can be observed in different contexts and situations. Therefore, the use of archetype theory can systematically guide prospective IS research to not only explain the nature of change but also explore configurations.

To apply archetype theory in IS research, our review motivates longitudinal case studies to rigorously reflect dynamics of configurations over time. We encourage mixed-methods research to not only explore configuration but also to confirm their generalizability in a larger extent. Our review confirms applicability of archetype theory on different levels of analysis. Therefore, we not only see value in applying archetype theory on a more granular level, where local variants of organizational specialties may be considered, but also in studies that concern multiple levels of analysis. Finally, our review reveals that, owing to its explanatory power, the theoretical constructs of archetype theory can be synthesized with other theories (e.g., agency theory) to be used as complementary lenses in providing thorough explanations of IS phenomena.

Our literature review is limited to publications in scholarly journals and AIS conference proceedings. This is a limitation in terms of coverage of relevant research (e.g., conference proceedings in other disciplines). However, this restriction ensures a certain quality level of the reviewed articles while including conference-level contributions from IS. Our study reveals that archetype theory has not gained much attention in IS literature (only one article, [31]). Therefore, our review provides insights on how this theory can be applied in prospective IS research.

6   Conclusion

While spotlighting the necessity of simultaneous investigation of configurations and change, this study contributes to the existing body of IS knowledge through introducing

archetype theory as a new theoretical lens, which guides IS scholars in such investigations. Through a literature review, this study carefully extracts theoretical constructs of archetype theory and investigates why, how, with which approaches, and through which methods archetype theory has been applied in the extant literature.

The concept of archetype provides a basis to systematically describe configurations in terms of their structural arrangement as well as the values and beliefs that reinforce these arrangements. The theoretical assumptions on change in archetype theory also provides a rich explanation on the dynamics of configurations. As such, this theory helps IS scholars elaborate on change not only through demonstrating movements among different archetypes, but also through indicating adjustments within an archetype.

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