Conceptual Framework for a Service-ecosystems Approach to Project Management

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Abstract

In response to calls for new and underexploited perspectives on project management, this paper proposes a conceptual framework to extend emergent project management thinking to a service ecosystems approach grounded in service-dominant (S-D) logic.

Project management – including project, program and portfolio management – is examined, as an industry-agnostic discipline, through the S-D logic, service-ecosystems lens. Congruence between the S-D logic, service-ecosystems approach and emergent perspectives of project management – including the motivation to see projects as complex, adaptable, dynamic, social processes undertaken to create value rather than products – is highlighted.

The research aim is to demonstrate that an S-D logic, service-ecosystems approach to project management offers a viable opportunity to strengthen the theoretical foundation of project management. This approach is positioned to consolidate current supportive, yet scattered research contributions and to, simultaneously, open new avenues to coalesce future interdisciplinary research contributions to strengthen and grow project management theory.

1. Introduction

The growing importance of projects within every sphere of society and industry has increased investment and interest in project management, including program and portfolio management [8][63]. Projects have become ubiquitous and many organizations have transformed their traditional functional structures to become "projectized" [44]. Project management is no longer seen as "just a sub-discipline of engineering" [63], but is now recognized as a semi- or commercialized-profession that is industry-independent [63]. After 30 years' research [28], academic project, program and portfolio management research is still "intellectually alive" [63] and prominent today across a berth of industries and settings [63][61].

At the same time, project management reflects unacceptably high failure rates across all industries [28]. This is a concern for management, practitioners, academics and professional associations [8][28]. A need is identified to improve content and concepts [65]. Floricel [22] calls for "underexploited and promising perspectives on the complexity of project organizations". Other literature [35][28][62][63] calls for new insights and non-traditional alternatives to manage projects, programs and portfolios. A shift is required from the classical engineering view of projects as straightforward, temporary production processes focused on cost, time and production-based specification [61].

Winter et al. [62] argue that project management needs to shift beyond the traditional view which is based on Porter's [43] restricted production-type value chain. Based on Normann's [40] work, they [62] argue for recognition of both the customer (exchange) and the customer's customer (including use). Allied with this, other research [15] identifies the need to see the full service flow [32] instead of separate provider- and customer- project activities. Similarly, several scholars (e.g. [13][46]) have called for recognition of knowledge co-creation processes within project management.

Furthermore, new thinking has recently emerged that, aligned with systems thinking, recognizes the complexity and dynamic social processes involved in project management [13][18]. Numerous authors (e.g. [13][18][23][36][46]) motivate that a shift is needed from traditional views of project management to an understanding of project management as a complex, adaptable, dynamic, social process undertaken to (co)create value rather than just to produce output (e.g., goods). We identify a significant correlation between this motivation and a service-dominant (S-D) logic service-ecosystems approach.

In this paper, we examine traditional and emergent views on project management. Identifying a correlation between emergent thinking and a service-ecosystems approach grounded in S-D logic, we present the latter as a new perspective. Our research aim is to demonstrate this as a viable opportunity to strengthen project management's theoretical

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foundation. We draw on the service-ecosystems approach to inform a more holistic framework for project management theory. We position it as an approach that consolidates existing supportive yet scattered research contributions and, simultaneously, opens new avenues to coalesce future inter-disciplinary project management research contributions.

We first examine traditional and emergent project management thinking. Then we conceptually frame a service-ecosystems approach and explain how this can be applied to project management. Drawing from each of the preceding sections, we then present a summary of traditional and emergent thinking juxtaposed alongside service-ecosystems thinking as a proposed conceptual framework. Implications of extending emergent thinking to service-ecosystems thinking – as proposed in the framework – are discussed in terms of central project management concepts and service-ecosystems thinking themes. Finally, we conclude by suggesting examples of potential opportunities for future cross-disciplinary research.

2. Traditional Views

We position the concepts of projects and project management before discussing traditional views, which are then summarized as "traditional thinking" in Table 1.

Projects are planned, temporary undertakings that mobilize resources – often including people who don't usually work together – to create unique and complete outcomes within budget and time constraints [5][44][52]. Projects have wide application across diverse industries. They may be undertaken by a non-profit or corporate organization or even by an individual or group such as a society, school or household. Within organizations, projects are managed in portfolios and programs in project landscapes with strategically aligned goals [4][44]. Examples of projects are: constructing a building, producing a film, developing a software application or even cooking a meal [39][63].

Project management refers to the discipline whereby knowledge, skills, techniques, processes and experience are applied to satisfy customer and stakeholder requirements, within time, cost and quality constraints [5][44][52]. Customers and stakeholders are people or organizations in the project team (headed by a project manager), with a vested interest in the project or who may be impacted by the project [52].

Today, project management is recognized as a semi-profession or a commercialized profession [39][48][62] practiced by trained project managers [63]. Professional associations have been set-up across the globe to formalize project management standards and practices, attracting thousands of practitioners as members [5][44][36]. The most prominent of these are the Project Management Institute (PMI), the Association for Project Management (APM), the Engineering Advancement Association (ENAA) and the Japanese Project Management Forum (JPMF) [36].

These bodies influence how projects are understood [17][36]. Despite their mass appeal, academic literature criticizes them for being narrow, shallow [17] and deterministic [24]. McKay et al. [36] state that these bodies fail to clarify their underlying assumptions. Geraldi [24] states that project managers are trained as technicians who obediently follow a set of techniques rather than interact with reality and practice a profession.

Emerging from the engineering industry [36][52], project management has its roots in hard systems thinking [42][45]. Hard systems thinking is a systems approach that assumes a system can be engineered to achieve a pre-defined and optimal output or solution [11]. Traditionally, projects have been seen as rational [37], linear, production processes [61]. Project managers manage a straightforward set of activities [61] focused on tangible resources that are used by the project team to produce and deliver a predefined end product or traditional service to a consumer. Focus is on the production process, including the project manager, a sequence of predefined project tasks within phases, and the product or output [38]. Project phases are performed from the project manager's perspective rather than the customer's (e.g. initiate; plan; execute; control; close [44]).

Traditional views focus on a project lifecycle that is completed upon or shortly after implementation, release or launch of a product or traditional service [5][44]. Focus is on the project activities and delivery rather than on the activities that take place after the product is released, i.e. the customer's post-implementation activities [15].

3. Emergent Views

Over the years, project management literature has seen numerous responses to the need for new perspectives on the traditional engineering view (e.g. [6][8][17][22][36][39][28][60]). New approaches and methodologies have emerged within academia and practice. They show a move away from the linear traditional approach towards more client-centric, dynamic and value-focused approaches [45]. There is more of a focus on the relationship of the project with its environment [48], interpersonal competences,

relationship management, resource management and strategic alignment [47][23].

Although project management remains linked predominantly to the hard sciences and determinism, today there is more acceptance of the soft paradigm and systems dynamics [42][45]. In fact, various researchers (e.g. [1][33][64]) have applied systems thinking approaches (e.g. System Dynamics (SD) and Soft Systems Methodology (SSM)) to project management. More attention is now paid towards organizational and human elements [37]. Further evidence (e.g. [38]) points towards focus on delivering project stakeholders' shared value (of a product) rather than product delivery alone [63].

A few examples of efforts to introduce new approaches include: agile project methods, partnering approaches [22] [45] and value- or benefits-driven approaches [9][27]. Further evidence of effort that highlights concerns about project management theory, its intellectual and philosophical foundations [63] and the need to create new project management knowledge [13][35] is the Rethinking Project Management (RPM) program.

RPM was a two year collaborative effort (2004-2006) between academics, practitioners and professional project management association representatives. It established a formal research agenda aimed at creating project management knowledge along neglected themes [13][35][62]. The high level of scholarly, organizational and facilitative effort that resulted in the RPM agenda [35][62] indicates the significant need for new insights along key directions related to project management conceptualization, focus, processes, practitioners, lifecycle and complexity [63]. Five key directions for future research emerged. These are: from a deterministic model as an all-encompassing model of reality to recognition of project management complexity at all levels; from projects as one-dimensional linear task sequences and temporary, apolitical production processes to projects as social processes; from focus on product creation to focus on value creation; from narrowly conceptualized projects with predefined objectives to multidisciplinary, multi-perspective and multipurpose projects that avoid predefinition and; from trained technicians following predetermined techniques to reflective, adaptive practitioners following sense-making processes [63].

The agenda was positively received and largely unchallenged, aside from a few suggested extensions that are, in fact, harmonious [8][35]. Suggestions included requests to add, for example: projects as knowledge co-creation processes [13][46]; project communication processes and complexity of context across diverse specialized groups of actors [13][36][46]; engagement, trust and interconnection at all levels [13][46]; recognition of the external environment [13][36] and; co-operative management style [13].

There have been many contributions (e.g. [6][8][17][39]), which even continue today (e.g. [6][8][17][22][28][36][39]). However, no explicit evidence can be seen of attempts to consolidate or evaluate existing responses. Additionally, aside from a few contributions (e.g. [45][61][65]), there is a gap in project management research from an S-D logic or service-ecosystems perspective [22][45][65]. This could possibly be because project management literature has only recently started to accept service theories [65]. This research gap represents an opportunity to apply a service-ecosystems approach as an underexplored alternative to improve and reconceptualize project management theory.

4. An S-D Logic, Service-Ecosystems Approach to Project Management

4.1 Conceptual Foundation

Since S-D logic concepts were established (see [54][55]), there have been a very large number of global and inter-disciplinary contributions [56][65]. Recently, S-D logic concepts have been distilled into a condensed foundation [31], including a more nascent explanation of the value co-creation within *service-ecosystems*. Several research articles (e.g. [3][56][57][58]) contribute towards this foundation by contextualizing and discussing the service-ecosystem.

We use this foundation as our departure point, briefly positioning key concepts due to the emerging character of the service-ecosystem and the novelty of this approach for project management. In this light, S-D logic, Goods-Dominant (G-D) logic and the service-ecosystem are now briefly positioned.

S-D logic and G-D logic are mindsets or lenses lens through which social and economic exchange phenomena can be viewed [55]. S-D logic sees exchange as a continuous flow in which applied skills and knowledge (service) are reciprocally exchanged, often masked by indirect service provision through goods [54]. It primarily emphasizes service as the basis of exchange, that value is always co-created, all social and economic actors are resource integrators and that value is always uniquely and phenomenologically determined by the beneficiary [31][54][55]. In contrast, G-D logic refers to an underlying paradigm focused on units of output, i.e. goods or products [31]. It focuses on the goods, production, producer, supply chain, etc. [54][31][55].

It also sees a separation of customer and provider and sees that the provider determines value upfront, which is then consumed and used up after exchange [54][31][55].

Recently a service-ecosystems perspective based on S-D logic was introduced [57][31]. Service-ecosystems are "relatively self-contained, self-adjusting system[s] of resource-integrating actors connected by shared institutional logics and mutual value creation through service exchange" [31]. This view emphasizes that social and economic actors engage in reciprocal flow of service provision, integrating operand and operant resources, to mutually create value that is unique to their situation and context [57]. Actors are connected through shared social contexts (e.g. language, symbols, technology [57] or institutional logics [10][20]) that both influence and are influenced by processes of value co-creation [57]. Operand resources are static resources that must be transformed to cause an effect or provide value [31][54], e.g. raw materials, data, etc. Operant resources are dynamic and capable of acting on other resources to create value, e.g. knowledge and skills used in value-creating acts [31].

4.2 Application to Project Management

Looking at project management through a service-ecosystems lens, we position project management conceptually as a service-ecosystem (grounded in S-D logic) consisting of complex networks of multi-tier and multi-purpose projects within programs, portfolios and across organizations. We describe projects, portfolios and programs as social, complex and dynamic systems where actors actively participate in the integration of operand and operant resources with the view of bringing about service innovation to co-create value [31]. As such, understanding project management as a service-ecosystem grounded in S-D Logic offers opportunities to better understand: (1) project lifecycle and complexity across all levels; (2) the nature and integration of operand and operant resources; (3) influence on and by social resources (institutions) as well as (4) the social and economic construction of relationships at an actor-to-actor (A2A) level.

We see a correlation between traditional project management views and G-D logic. Our view is supported by research [14][45][65] that examines project management through an S-D logic lens, also identifying its grounding in G-D logic.

5. Framework and Implications

Specific concepts that are central to the service-ecosystems approach are: a service-for-service flow; value co-creation; resource integration and**;** creation of shared institutional logics – or institutionalization. These concepts are used to frame a service-ecosystems approach to project management, as reflected in the "service-ecosystems thinking" in Table 1 and discussed in the following subsections.

Table 1 also reflects central concepts from traditional and emergent views on project management (sections 2 and 3). It is based on a similar structure as that presented by Akaka et al. [2] for a service-ecosystems approach for International Marketing (IM).

5.1 Service Flow

In terms of the service-ecosystems approach, "service flow" emphasizes the continuous, dynamic and adaptive flow of service (knowledge and skill) exchanges through interactions among networks of actors reciprocally engaged in value co-creation through complex relationships [7]. Literature on technology as an operant resource [2][41] urges for a shift from traditional views that separate the development of technology from its use. A similar argument stems from Clavier et al. [15] on the topic of Business Intelligence (BI), including BI projects. This points towards a need to see the full service flow [32] rather than to separate project activities (e.g. develop, build) from use activities. Service flow emphasizes that value can neither be predefined, nor can it be achieved merely as a result of exchange or implementation [54]. Instead, value is proposed based on knowledge of the full flow of service (including the customer environment) [32][40] and is continuously re-evaluated and redefined throughout the lifecycle [27]. Seeing the full service flow extends service past exchange into customer use, where the customer measures value phenomenologically [55].

The shift from traditional to emergent thinking already indicates that the project lifecycle is no longer bound by a linear production-focused sequence of project tasks that ends with implementation (exchange) of predetermined project objectives or outcomes [63]. Instead, emergent thinking sees project management in terms of systems thinking, which recognizes the complexity and the dynamic social process involved in service provision [13][18].

Project management literature (e.g., [63]) also already reflects the need to reconsider "by whom" value is measured, thereby highlighting the potential to recognize the S-D logic principle of the phenomenological and beneficiary determined nature of value. Furthermore, based on Normann's work [40], it is argued [63] that value occurs in project

Table 1: Extending Traditional and Emergent Thinking on Central Project Management Concepts Towards Service-ecosystems Thinking (as per references in sections 2, 3 and 4)

Central Concept	Traditional Thinking	Emergent Thinking	Service-ecosystems Thinking
Lifecycle and method	Linear, deterministic, ends at exchange of predefined outcome, predefined "production" process	Systems thinking, ends at "customer's customer" [40], avoids predefinition	Continuous complex, adaptive and dynamic <u>service flow</u>, successful outcome is measured phenomenologically by customer
Focus	Product (production process)	Value creation (client, relationship)	<u>Value-cocreation</u> (value network)
Management and resources	Practitioners as trained technicians, operand resource focus, project manager emphasis	Reflective and adaptive practitioners, knowledge co-creation recognized, project manager to client emphasis	All social and economic actors are <u>resource integrators</u>, actor-to-actor emphasis, institutionalization recognized (operant resources)
Complexity	One-dimensional, simple, narrow	Multi-disciplinary, -purpose and level, dynamic, social process	<u>Institutionalization</u> recognized, dynamic configurations of socio-technical entities connected in complex networks through value propositions and shared information

management when the full context is known and the project moves beyond an internal product and project focus to an extended value focus on both the customer and the customer's customer/environment.

This suggests that emergent thinking is already somewhat aligned with the service-ecosystems view as it emphasizes: systems thinking as an alternative approach (which brings about implications for understanding dynamic interconnected entities involved in value co-creation [57]; the need to understand by whom value is measured (a step towards recognizing unique context [57]); and the fact that value cannot be predefined. Service-ecosystems thinking extends emergent thinking in specific ways that are relevant to project management.

First, not only does it draw attention to the customer's customer, context of the customer environment and the importance of seeing "by whom" value is measured, it also emphasizes value-in-use and value-in-context. Value is created in use by the customer and is personal, experiential, contextual and meaning-laden – the customer determines whether or not the service is valuable [54]. A service-ecosystems view extends value-in-context from evaluation by a customer, to a service-ecosystems view where multiple perspectives of the service encounter within various levels of the ecosystem are considered [10]. Value is based on the ability of the actor or service system to adapt and thrive in its environment [56]. Odds of survival are reduced when disputes are experienced across the various levels, including disputes that arise because one or more involved actors – connected in multiple networks and at multiple levels – fail to derive value [31]. An implication for project management is recognition and thereby potential avoidance through

awareness of disputes between the different levels – e.g. project, program, portfolio – that decrease the likelihood of an exchange interaction achieving a valuable outcome. Another implication is that the point at which and the way value is measured needs to change within project management. There is already growing recognition that project management success or value should not only be measured in terms of delivering a product on schedule, budget and within defined quality parameters (project management's "iron triangle") but also according to the value that the organization or beneficiary derives from the product or output (e.g. [27][45]).

Second, there is a change to the provider and beneficiary roles and relationship. The provider (e.g. in many service interactions this is the project or the project manager) cannot proclaim to be able to deliver value, defining this upfront [63] but can only offer value propositions which the beneficiary may choose to accept [51]. The role of the beneficiary (e.g. in many service interactions this is the user, organization or sponsor), also changes as they can no longer be a passive recipient but must actively participate as a co-creator of value [12]. The customer is in an interdependent relationship with other service-ecosystem entities, playing an interchangeable role of customer and provider according to the nature of the relationship and service [12]. This implies that instead of "customer"-"provider" relationships, there are actor-to-actor (A2A) relationships only [57]. Project management has already embraced client-centric views [22][45], but in terms of a service-ecosystems approach needs to evolve to a point where it is not narrowly concerned with the customer, but has a balanced service-for-service performance and A2A approach. Customer and provider both have rights and duties in

terms of an agreement and inseparably co-create value in a relationship with each other. The change of roles and value co-creation are discussed further in section 5.2.

5.2 Value Co-creation

Not only does project management bring diverse specialist groups of socio-technical resources (e.g. information, technology, people, institutions) together to synergistically co-create value, it also engages in complex relationships within and beyond the project and organization [18][23][65]. As such, it is a perfect example of dependency brought about by increased specialization (complification [25]). As the antithesis of self sufficiency, this emphasizes that there is no choice but for value to be co-created if it is to manifest.

Project management recognizes the broader vision of long-term value creation and incorporates elements such as organizational change, organizational strategy and operational processes to bring this about [35]. The need to shift project management's prime focus area from product creation constrained by project initiation and closure, to value creation that extends beyond project closure is reflected in the literature (e.g. [63]). The literature calls for research to improve "strategic selection (and non-selection) of projects and programs in organizations, recognizing different forms of value and the need for new models of value creation beyond the conventional 'value chain' type representations of production and manufacturing" [63]. It also demonstrates awareness and risks of the intrinsic product focus of concepts that may be misconstrued to have a value focus resulting from nomenclature such as "value management" [62].

While this indicates that the importance of value creation at various levels (e.g. project, program, portfolio) is already recognized within project management research, it also highlights the focus on value creation rather than value *co*-creation. Value co-creation, an essential cornerstone of service systems [34] and service-ecosystems, refers to the "idea that value is created through interaction and mutually beneficial relationships, within and among service systems, as they integrate and apply resources for and with each other and exchange service for service" [56]. The service-ecosystems view emphasizes that, while value co-creation occurs at every exchange encounter [3], it extends beyond the individual encounter [56]. It integrates existing operand and operant resources (e.g. knowledge, free flowing information) with new resources in focused action and, within a situation and context, results in the co-creation of further operant resources in an

iterative fashion [40]. This extends to project management where collaborative efforts, among e.g. project team members or project teams and stakeholders, can result in the co-creation of value at project exchange encounters across micro, meso and macro levels.

In particular, a service-ecosystems view of value co-creation extends to shift project management from the desire to move towards "value creation" (shifting from a product focus) [63] to "value co-creation". Implications arise for project management in terms of recognition of interactive and mutually beneficial exchange relationships at various levels, availability and transformation of resources [31] and opportunities for integration within a specific context and situation [54]. A further implication is that the project manager's role is elevated to include strategically orchestrating value co-creation opportunities while tactically removing obstacles, resolving disputes between collaborating resources and providing access to resources. Finally, as explained in section 5.1, the provider and customer responsibilities in value co-creation and the A2A relationship dynamic are made explicit . The provider can only offer value propositions and cannot create value in isolation; the customer must accept or decline value propositions and, if accepting, take on an active role in co-creating value for it to emerge in contextual individual and collective assessment during use [12][57]).

5.3 Integration of Resources

A service-ecosystems view sees that the integration of operand and (especially) operant resources – in a service for service flow of exchange to co-create value through the sharing of information, work, risk and goods – drives project management [16][34]. Integration and exchange – performed by all economic, social and technical project stakeholders and actors [55] – are needed for operant resources to be created [54]. S-D logic draws attention to "whom", or rather, "whom and what" are integrating resources, emphasizing that all actors are resource integrators [55]. An implication for project management is that it is not just the provider who is responsible to or able to integrate resources: customers or other stakeholders as well as operant resources (people, information, technology, institutions, etc.) are also capable of integrating resources and engaging in exchange to co-create value [55]. As noted, a service-ecosystems view emphasizes that value co-creation occurs through resource integrators in networks of networks [55], with integration taking place at an A2A level and with every individual service encounter [10][31]. An

implication for project management is that an A2A approach removes the "provider" and "customer" labels [31], thereby giving permission to change the provider and customer dynamic, responsibilities and expectations.

Without overlooking the importance of operand resources [32], a service-ecosystems view recognizes the primacy of operant resources, i.e. resources that are capable of contributing or influencing [57]. A shift to recognize the primacy and participative role of project customers, stakeholders, technology, information and social resources (institutions – shared rules or norms governing interaction [10]) may open up previously unrecognized opportunities for project management.

In contrast to the service-ecosystems view, project management recognizes the primacy of operand – and not operant – resources, seeing the project manager as the role that is responsible for integrating these resources [5][45][44][65]. New thinking is steering project management towards more of a client-centric approach [45], however, while this is possibly an improvement on a pure production focus, this is not a balanced service-for-service approach and still results in provider and customer separation [55]. Furthermore, suggestions are made to shift project management from its current G-D logic focus on producer (project manager), production process (technical project management process) and product (outcome of project management process) [45][65]. Where integration of resources is recognized in the literature (e.g. [5][44]), this is in terms of the project manager acquiring, monitoring and controlling human, financial and traditional goods and services resources sourced from outside the project [52]. Project management scholars [13][46] call for the establishment of knowledge co-creation processes within projects. This highlights a shift towards recognizing the importance of the role of operant resources (e.g. knowledge) in co-creating value. The co-creation of new knowledge as an operant project resource is discussed in context of institutionalization in the section that follows.

5.4 Institutionalization

Looking at project management through a service-ecosystems lens contextualizes project management as consisting of dynamic configurations of multi-tier and multi-purpose socio-technical entities connected in intricate networks through value propositions and shared information. This, in turn, highlights that there are micro-, meso- and macro-levels at which project management value co-creation

interactions take place (e.g. project, program and portfolio levels as *one* such view).

These interactions are connected through and influenced by shared structures and governance mechanisms that provide context for and also result from interactions [10][26]. Shared structures, information, value propositions and governance mechanisms may be seen as institutions – i.e. socially constructed operant resources – such as cultural symbols and material practices, including values, beliefs, traditions, etc. [53]. Fields, professions or disciplines – including project management – may also be seen as institutions [19]. These are defined and structured through normative rules that govern professional behavior; interactions between entities within the field; strong patterns of coalition and; awareness of a common enterprise [19].

Institutions are critical constructs of value co-creation within service-ecosystems [54][57]. The integration of resources for value co-creation is framed in context of micro-, meso- and macro-level interactions where each is guided by a set of distinct institutions that may or may not be compatible with those at other levels, resulting in a successful (mutually beneficial) or unsuccessful interaction [31]. Vargo et al. [58] describe the dynamic relationship between interaction and institutions as institutionalization, "the maintenance, disruption and change of institutions". Institutionalization provides critical insight into the service-ecosystems view on project management, moving new project management thinking beyond the dynamic and social process [63]. We discuss three such insights within this paper as a starting point.

The first insight is that project management is a discipline [52] that results from institutionalization [19]. This insight offers the opportunity to deconstruct project management (as an institution itself) in terms of the institutions that recursively guide it and are, in turn, influenced by it. As an example, theory should emerge from practice and *vice versa* [21] but, in the case of the professional guiding project management bodies of knowledge, recursive value co-creation is limited, epistemological foundations unclear and practice and theory appear to develop in isolation [17][35].

A second insight is that project management interactions are governed by distinct, context-bound, multi-level institutions that may be in conflict. Beyond the organizational view of project-program-portfolio, this can be seen in other levels where projects bring together diverse specialist areas (e.g. plumbers, electricians, etc. building a house) and professional jargon, "rules of the game" [49][57],

"language games" [36], social contexts [10][20], etc. result in potential for disputes.

Finally, a third insight is that the interactions and exchange within project management (undertaken to co-create value) inadvertently co-create new institutions, contribute to existing institutions and, in turn, are influenced by these. Knowledge co-creation processes [13][46], technology [2] and innovation [58] are examples. Understanding the underlying structuration [26] processes within project management can assist to build project management theory towards reflective, adaptive and resource-integrating project actors, as per the call for such research [63].

6. Concluding Remarks

The conceptual framework we present in this paper is aimed at contextualizing project management in terms of a service-ecosystems approach grounded in S-D logic.

Research implications and insights that can be used to strengthen project management are described in section 5. We suggest that further complementary theories, philosophies and interdisciplinary research are explored along the directions provided in the framework, summarized in Table 1. We see that value can potentially be co-created through research efforts that contribute to project management theory in directions towards complexity theory [29][59], systems thinking [11][64], institutionalization [53], structuration theory [26][41] and actor-network theory (ANT) [30] as a few suggested examples

We emphasize that our suggested framework is not proposed as a single new version of the reality of project management. Instead, we explicitly identify it as another partial view – albeit a view that we hope will build on or even transcend existing restrictive views on project management. The framework is, in fact, a value proposition to future researchers to consider accepting for the purpose of co-creating further fuller views that are needed to strengthen project management theory. We see our framework as groundwork to this end and as an invitation to researchers in diverse fields to build project management theory.

7. References

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