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Project value as practice: Interactive valuation practices in architectural design projects

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ABSTRACT

In project research, value has been conceptualized either as something subjective in peoples' minds or as an objective reality. However, in practice, project actors encounter, express, and negotiate value both subjectively (e.g., as ideals and beliefs) and objectively (e.g., as the price) depending on the evolving circumstances of real-life situations. To capture the project value phenomenon from project actors' perspective, we adopt a projects-as-practice approach on project value, which puts the emphasis on the activity, process or practice of valuation rather than on value as something in itself. This suggests that project value must be understood with a focus on valuation practices, through which various project actors express what they value, and through which they evaluate the alternative ways of proceeding with the project tasks in hand. Using practice-level interaction data from three projects in an architectural practice, we reveal three nexuses of interrelated valuation practices with distinct practical rationalities, through which various considerations of project actors manifest themselves and get resolved in different ways. We argue that these valuation practices combined create an ongoing process of reconciliation in the observed projects and enact project value on an ongoing basis. We discuss how the cross-cutting issues of relational constitution of valuation practices, temporality as well as power relationships configure the practical rationality of valuation practices, thus determining the enacted project value. Our study complements the existing research on project value by establishing project value as practice, and by highlighting relational constitution, temporality, and power as key issues for the study of the project value phenomenon.

1. Introduction

The delivery of value has long been established as the purpose of projects (Morris, 2013). The understanding of projects as value generators has been an important part of the project research agenda since the 'rethinking project management' movement (Svejvig & Andersen, 2015). As a result, the understanding of project value has significantly expanded to consider the different value perspectives of actors involved with the project. For example, recent project value research emphasises the importance of aligning the goals of different project actors (Lehtinen, Peltokorpi & Arto, 2019) and co-creation of value (Fuentes, Smyth & Davies, 2019; Keays & Huemann, 2017; Pargar, Kujala, Aaltonen & Ruutu, 2019) through social interactions. Thus, this body of work emphasises the interactive nature of project value by studying it as a multifaceted phenomenon that emerges in its social context. Hence, recently there have been calls for studying project value as a dynamic social process underpinned by actors' subjective views of value, as opposed to the more conventional static and objectivist perspective

(Green & Sergeeva, 2019; Martinsuo, 2020; Martinsuo et al., 2019a).

However, in practice, project actors encounter, express, and negotiate value both subjectively (e.g., as ideals and beliefs) and objectively (e.g., as the price) depending on the evolving circumstances of real-life situations. Thus, mutually exclusive subjective and objective formulations of value, which see value either as something in people's minds or as an objective reality, fail to properly capture the project value phenomenon as experienced by practitioners. Therefore, more research is needed to explore how project actors value things under the evolving circumstances of situated project practices, and thus enact the project value.

The paper addresses this research gap by adopting the 'projects-as-practice' perspective (Ahern, Leavy & Byrne, 2014; Blomquist, Hällgren, Nilsson & Söderholm, 2010; Bredillet, Tywoniak & Dwivedula, 2015), which is founded on a practice-based theoretical lens (Feldman & Orlikowski, 2011; Nicolini, 2009, 2012; Sandberg & Tsoukas, 2011). Adopting a practice view on project value shifts the focus away from previously proposed mutually exclusive objective and subjective

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formulations of 'value(s)' (i.e., noun), to 'valuation' (i.e., activity) as a material-discursive practice (Kornberger, 2017; Orlikowski & Scott, 2014) performed in projects. A focus on valuation as a social practice implies that valuation practices are "sayings and doings that actors express, which do not merely mirror or bring to the fore particular perceived views, but also actively constitute and enact them" (Knight & Cuganesan, 2020, p.194) within the project. Thus, studying the details of what people say and do in valuation practices (Feldman & Orlikowski, 2011) exposes the 'practical rationality' (Sandberg & Tsoukas, 2011) that underpins those sayings and doings, and hence, the value outcomes of the project. A practice view of project value (i.e. project value as practice) advances the conceptual understanding of project value and reveals the practical considerations and circumstances that determine the enactment of project value.

In this paper, we study the empirical setting of collaborative decision-making events in an architectural practice undertaking three projects at different stages of development. This empirical setting is appropriate for studying project value from a practice-theoretical lens because projects acquire their shape progressively through interactions between different project actors, where various knowledge domains and corresponding value paradigms are expressed and reconciled (Ewenstein & Whyte, 2009). The selection of projects at different stages was guided by diversity sampling to maximise the variation within the observed phenomena, but within the same organisational setting and within a relatively short time span that was a condition of our research design. To explore the practical rationality that underpin valuation practices, we build upon Sandberg and Tsoukas (2011) in our analysis, and focus on isolating situations of tension and disagreement (i.e., temporary breakdowns) as well as observing the subsequent efforts for reconciliation (i.e., entwinement). The analysis reveals three interrelated valuation practices with distinct practical rationalities. These determine the ways in which actors' diverse views manifest themselves and get reconciled, thus enacting the project value on an ongoing basis.

The paper is structured as follows. The next section first discusses the extant work on project value, which adopts mutually exclusive subjective or objective formulations of value. We then articulate the alternative practice-based view and the practice-based focus on valuation practices that are performed as part and parcel of project actors' interactions for collaborative decision-making. Following this, we introduce the research design, data collection and analysis, including the context of the architectural practice and the three projects studied. Findings present practice-level episodes of interaction that illustrate the three valuation practices with distinct practical rationalities. Subsequently, we discuss relational constitution, temporality and power as the cross-cutting aspects that configure the practical rationality of the observed valuation practices. We finally highlight our contribution to the extant research on project value as well as the implications of this work for future research on project value.

2. Project value and practice theory

A recent stream of literature in project studies explores how project value is created, captured, optimised, and managed in project organisations. While traditional project management literature focused on notions of project success and understood value management as delivering similar specifications at a lower cost and/or in less time (Winter & Szczepanek, 2008), recent literature in project management and project studies moved from this understanding towards seeing beyond the immediate tangible deliverables of projects, and considering the various expectations by the multiple actors involved across the project's life cycle (Svejvig & Andersen, 2015). In particular, with a growing emphasis on projects as value generators, recent research emphasised the different project actors' perspectives of value that are often both diverse and conflicting (e.g., environmental sustainability vs. financial viability) and heavily context-dependant (e.g., activists vs. sponsors) (Eskerod & Ang, 2017; Laursen & Svejvig, 2016; Veeneman, Dicke & De

Bruijne, 2009; Vuorinen & Martinsuo, 2019; Zerjav, McArthur & Edkins, 2021). Recent work on project value also highlighted the interactions between these various project actors as key to understanding and dealing with project value as a complex phenomenon (Arto, Ahola & Vartiainen, 2016; Fuentes et al., 2019; Liu, van Marrewijk, Houwing & Hertogh, 2019).

As a result, there have been calls for approaches to further emphasise the subjective, negotiated and context-dependant nature of how actors value things in the interactive setting of projects (Martinsuo, 2020; Martinsuo et al., 2019a). For instance, Martinsuo (2020) focuses on the need to understand project value in relation to various interacting project actors' subjective ideals and beliefs which are manifest in project interactions and determine project practices and outcomes. Similarly, Green and Sergeeva (2019) propose the notion that different views of value in a project are a result of the competing narratives rooted in the performance of identity construction of various project actors. In this way project value is discursively constructed using stories and narratives. Although these studies extend the understanding of project value by highlighting the determining role of the wider social context and social interactions, their explanations do not consider the specific practical contexts of real-life situations, within which practitioners pragmatically make sense of, and cope with, the specific issues that they are facing. For this reason, we draw on 'practice theory' to propose an approach to explore how people value things in situated project practices with a focus on the context-specific considerations and circumstances that underpin practitioners' situated value interactions.

Practice theory is an umbrella term that refers to various strands of theorisation of practices (Nicolini, 2012; Stern, 2003), with the shared assumption that empirically observable everyday practices comprise 'the house of social', through which social reality of individuals continuously emerges and unfolds (Schatzki et al., 2001; Stern, 2003). This means that it is the unfolding sayings and doings in everyday situations which reproduce the lived social reality and the context of actions and interactions (Feldman & Orlikowski, 2011). In other words, social and organisational phenomena are constituted through everyday practices wherein social actors make sense of what to do and what ought to be done in the flux of unique situations (Sandberg & Tsoukas, 2011). The application of these insights into project management and studies emphasises a 'becoming ontology' proposing that the reality is neither static nor a series of static positions, but that it is brought into being in every instant as a result of what people say and do through the unfolding flux of situations (Buchan & Simpson, 2020; Cicmil & Marshall, 2005; Cicmil, Williams, Thomas & Hodgson, 2006; Sergi, 2012; Sergi, Crevani & Aubry, 2020). Hence, reality is understood as constituted of path-dependant episodes of actions and interactions (Feldman & Orlikowski, 2011). The understanding that projects are enacted through their everyday sayings and doings was used to develop the 'projects-as-practice' stream of work (Ahern et al., 2014; Blomquist et al., 2010; Bredillet et al., 2015).

In alignment with the projects-as-practice stream of research, we approach the phenomenon of project value through a focus on 'valuation' (i.e., the activity), rather than 'value' (i.e., the noun). As explained by Muniesa (2011) based on Dewey (1939), value (i.e., the noun) is neither a subjective nor an objective unit of analysis, and it should be rather understood in practical terms. This is because, in real life, value is always enacted through valuation practices, whereby some acts of rating are performed in a specific context and towards a practical end (e.g., deciding what to do), which involves an entanglement of both subject opinions (e.g., liking) and objectified forms of value (e.g., the price). As highlighted by Kornberger (2017), and Knight and Cuganesan (2020), the relational and unfolding nature of such valuation practices suggests that they are constitutive in the sense that they do not merely mirror or bring to the fore individual subjective views or objectified measures of value, but also actively interweave, constitute and enact them in certain ways. For this reason, Kornberger (2017) claims that valuation practices are the corollary of value; meaning that it is the accomplishment of

valuation practices that constitute value.

Hence, a practice-based approach shifts the analytical focus to the acts of rating and processes of weighing that accomplish material-discursive valuation practices in specific ways, and the outcomes generated as a result (Orlikowski & Scott, 2014). Such an analysis of valuation practices is promising as it can expose their practical rationality (Sandberg & Tsoukas, 2011) by demonstrating the relations of mutual constitution between the structural context, interrelated events, people's situated understandings and actions as well as the materiality of objects, which overall provide the practical context of situated valuation practices, and thus, determine their outcomes. Importantly, Feldman and Orlikowski (2011) note that these relations of mutual constitution do not imply equal relations, and they are rather "*relations of power, laden with asymmetrical capacities for action, differential access to resources, and conflicting interests and norms... Power is thus understood to have both constraining and enabling implications for everyday action*" (p. 1242–1243).

Overall, a practice-based approach can add to the research on project value by exploring the project value phenomenon from the practitioners' perspective. This shifts the attention to project actors' unfolding sayings and doings in real-life situations of rating and weighing (i.e., valuation practices) based on their understanding of the evolving practical context. Thus, a practice-based approach enables an empirical analysis of the pragmatism involved in project value interactions as well as of the evolving practical context which influences the outcomes of those interactions. Ultimately, a practice-based approach adds to the existing body of knowledge by conceptualising project value as its practiced (i.e., project value as practice), which provides different insights than the previous mutually exclusive subjective and objective conceptualisations of project value enabled.

3. Research method

3.1. Research design

Our empirical enquiry focuses on the setting of architectural design as a project-based organisational context to explore project value as practice. Projects undertaken in this setting are value-driven throughout and they acquire their final features as the project proceeds through value-based decisions and actions of the project team. Additionally, both design and construction phases of the projects sit at the intersection between different knowledge domains underpinning diverse value paradigms such as cost effectiveness for the client, analytical reasoning and problem-solving in engineering design, aesthetics and space synthesis in architectural design, and operational efficiency during site works (Bos-de Vos, Volker & Wamelink, 2019; Cross, 2006; Pahl & Beitz, 2013; Thomas, Riley & Messner, 2005). In this setting, projects progress through a collaborative effort during which various knowledge domains and corresponding value paradigms are negotiated (Ewenstein & Whyte, 2009).

Project actors interact by saying and doing context-specific things that not only express what they value, but also enable an evaluation of the alternatives on how to proceed with the project tasks in hand. Our empirical focus is on these sayings and doings, such as engaging with and commenting on an idea in a meeting, or confronting those of other actors, and eventually reconciling to enable the project to progress in a certain direction, which ultimately determines the outputs and outcomes of the project. In such a way, our practice-level interaction data from the collaborative decision-making practices of these projects provide a prime example to study valuation practices and their enactment of project value.

3.2. Empirical context

The case study organisation is a London-based small architectural firm with (at the time of the empirical work) 15 employees specializing

in architectural, interior and renovation design of single and multiple residences and small developments. The firm is project-based offering a host of creative design solutions, emphasising project value at the very core of their activity (Lawson & Dorst, 2013), also evidenced in the receipt of multiple excellence awards by property and design professional bodies. The company's projects mostly involved residential design delivered for private one-off clients, putting value considerations around the trade-off between costs and features at the forefront of the interactions between the client, the project manager (in this context the architect), and the rest of the design team.

3.3. Case projects

Following Millen (2000), the projects to be empirically studied were decided together with the 'field guide' (a senior architect at associate level in the case organisation) identified by the researcher. Three projects were selected for the embedded case study design (Yin, 2008). Projects captured early design, detailed design, and construction stages, and were followed for a month, initially to observe collaborative decision-making and its practical rationality in the evolving context for each of the three projects. The studied projects were all residential refurbishment projects of a similar scale and complexity, all of them delivered for inexperienced first-time private clients. However, the clients were different for each project, as were the individual project architects tasked with the delivery of design projects. Having the 'field guide' involved in the project selection process ensured that the diversity sampling involved three projects with diverse value-related issues to be resolved through sayings and doings in collaborative project practices.

The first project (Project 1) is a 300sqm, five-storey house refurbishment project in London. Data collection on this project occurred when it was at RIBA Stage 1 (Preparation and Brief) through to RIBA Stage 2 (Concept Design). Therefore, the main feature of Project 1 at the time of data collection was a challenge related to the high uncertainty characterizing the early stages of the project life cycle: although there was a project brief in place, the unexperienced client would continuously change their opinion about design options with a fear that the proposed solutions would increase the project cost. As a result, during the period observed of Project 1, the interactions occurred in the context of continuous iterations between the client's changing requirements and the design team's proposed solutions.

The second project (referred to as Project 2) is a 250sqm four-storey house refurbishment project in London. Data collection on this project occurred when it was at RIBA Stage 4 (Technical Design), at the point in time when the tender documents were returned by the contractors after a single stage competitive tender that was issued to four contractors. The main issue on this project was to amend the already advanced design to accommodate the client's continuous push for cost reduction. Therefore, the observed interactions in Project 2 occurred in the context of the design team identifying a range of solutions that could address the client's main objective –i.e., an overall project cost reduction, while keeping the overall design intent intact.

The third project (referred to as Project 3) is a 200sqm three-storey house refurbishment project in London. Data collection took place while the project was at RIBA stage 5 (Construction). The main feature of Project 3 at the time of data collection was the lack of engagement of the client in decision-making. Strategic choices are in the client's realm to select between the feasible alternatives being put forward by the design team. The client would also accept invitations to the site and then cancel last minute. This caused delays in decision-making. As a result, observed interactions in Project 3 occurred in the context of the client's lack of involvement, which was needed for the project to progress. Importantly, as the project was in the construction stage, there were less options to choose from when compared to the other two observed projects.

3.4. Data collection

The research uses rich observational data collected by the second author (the researcher) who had been working (i.e., was embedded) as Part 1 Architectural Assistant for a year in the case organisation prior to the beginning of data collection. In this year, she participated in decision-making in projects, was immersed in the organisation’s culture, and built long-term relationships with the project actors who became the informants of the study. This prior involvement with the case organisation was key for the month-long data collection, as it informed this research with a solid understanding of the organisational culture, and practices in the studied setting (Langley, Smallman, Tsoukas & Van de Ven, 2013).

Once the projects were selected, the researcher attended the weekly meetings on site and at the office to ensure that she would be present when the important meetings around key decisions were taking place. Over a one-month period, data collection captured a substantial amount of the interactions on the three projects that were observed. Within this month the researcher attended seven meetings, which lasted approximately three hours each, so a total of twenty hours of project meetings were observed for the purposes of this research. Each meeting had subsequent minutes produced by its respective project manager which also feature in the data collection. Similarly, follow-up emails which would question any decisions or clarify misunderstandings were collected. The data collection is summarised in Table 1.

As shown in Table 1, data collection mainly took place through two types of observation: the first type was passive observation whereby the researcher only observed decision-making and did not interrupt the process, allowing the researcher to observe instances and interactions that others within the cultural system could not (Dainty, Pink, Tutt & Gibb, 2010). The second type of observation used was participant observation, whereby the researcher became part of the decision-making process and had the opportunity to interrupt when necessary. Becoming a participant involved being part of the cultural system, which in turn translated into a better first-hand experience of the organisation (Lloyd & Deasley, 1998) and better comprehension of the interactions and decisions being made (Millen, 2000). The use of the

Table 1
Data collection method.

Projects	Data Collected
Project 1	2 Meetings, each approximately 2.5 h long. 1st Meeting: (Architect, Client at the client’s house) To discuss the design with the client - a combination of Passive-Observer and Participant-Observer Techniques used. 2nd Meeting: (Architect, Client at the office) To discuss the progress – Passive-Observer Technique used. 2 Subsequent meeting minutes - written by the architect (after each meeting). 3 Emails, regarding follow up queries from the meetings.
Project 2	2 Meetings, each approximately 3 h long. 1st Meeting: (Architect, Contractor, Basement Specialist at the office) To discuss about the pipe problem - Passive-Observer Technique used. 2nd Meeting: (Architect, Contractor, Basement Specialist at the office) To cut the costs - Participant-Observer Technique used. 2 Subsequent meeting minutes - written by the architect (after each meeting). 2 Emails, regarding follow up queries from the meetings.
Project 3	3 Meetings, each approximately 3 h long. 1st Meeting: (Architect, Contractor, Engineer on site) To discuss the issues - Passive- Observer Technique used. 2nd Meeting: (Architect, Contractor, Engineer, Client on site) To discuss the design with client - combination of Passive-Observer and Participant-Observer Techniques used. 3rd Meeting: (Architect, Contractor, Engineer, Client on site) To discuss the progress - a combination of Passive-Observer and Participant-Observer Techniques used. 2 Subsequent meeting minutes - written by the architect (after each meeting). 1 Email, regarding follow up queries from the meetings.

two types of observations supported the analysis by enabling the researcher to gain a good understanding of both insider (emic) and outsider (etic) perspectives for grasping the practical rationality (Sandberg & Tsoukas, 2011). Besides the two types of observations, the researcher extensively took notes, as a tool to evoke memories of the events later and as a means of interpreting the events after further consideration (Jackson, 1990; Pink, 2005). Additionally, the researcher was also engaged in reflective conversations with the relevant informants in the case study organisation to acknowledge her role as a researcher and to gather additional information about project actors’ perceptions on the interactions supporting the field notes.

3.5. Data analysis

While the original data collection was revolving around practices of collaborative decision-making as described in Table 1, the subsequent analytical process focused on revealing the practical rationality of valuation practices shaping the project value. We therefore followed Sandberg and Tsoukas’ (2011) suggestion for searching for ‘temporary breakdowns’ and ‘entwinement’ in the data to grasp the logic of practice, or in our case, the practical rationality that underpins the observed acts of rating and processes of weighing alternatives in decision situations.

Sandberg and Tsoukas (2011) suggest that temporary breakdowns occur when there are (1) thwarted expectations, (2) deviations from routines and boundary crossings, and (3) awareness of difference. For this reason, to find temporary breakdowns, we first identified situations of tension and disagreement that emerged due to actors’ new realisations about a decision situation (e.g., an unexpected consequence) as well as their different views on what decision to make and why. These situations of tension and disagreement exposed the different considerations of different parties as well as how they interact in specific ways to express these differences. Secondly, we also studied entwinement. Sandberg and Tsoukas (2011) suggest that entwinement can be captured by (1) focusing on what people say and do to achieve particular purposes, (2) zooming in on how the activity is accomplished in a given situation, and (3) zooming out on the relationships between various practices, which reveal the interconnectedness of the practice under study. In line with this, we studied interactions for reconciliation and resolution of the previously identified tensions and disagreements (i.e., breakdowns). When studying these subsequent interactions, we zoomed in to understand how the sense of accomplishment is achieved in each situation, and then zoomed out to understand how interactions in one situation shaped the subsequent ones. Thus, the foci on temporary breakdowns and entwinement were complementary, and enabled an understanding of how various considerations emerge and are reconciled pragmatically, showcasing situated and unfolding valuation practices that enact project value as an emergent process of becoming.

Ultimately, the purpose of the analysis was to develop a thick empirical description of valuation practices in the observed setting and highlight the role of the situated logic of practice (i.e., practical rationality) to establish project value as a practice-based phenomenon. The strength of such thick empirical descriptions is in espousing the detail of

Table 2
Codes for data sources.

Project	Code Represents	Code
Project 1	First meeting	ME-1.1
	Minutes corresponding to first meeting	MI-1.1
	Emails corresponding to first meeting	EM-1.1
Project 2	Second meeting	ME-1.2
	First meeting	ME-2.1
Project 3	Second meeting	ME-2.2
	First meeting	ME-3.1
	Second meeting	ME-3.2
	Minutes corresponding to second meeting	MI-3.1

the phenomenon and exposing the mundane-looking relational aspects of the presented practices as key to the study of the subject matter (i.e., the project value), thus, providing new ways of approaching its study (Stern, 2003). The codes used to represent the data sources are listed in Table 2.

4. Project value as practice through interactive valuation practices

We identified the situations of tension and disagreement (i.e., temporary breakdowns), and then zoomed in to, and out of, the subsequent interactions which aimed to accomplish a situational reconciliation (i.e., entwinement). We identified three interrelated nexuses of valuation practices. Each of these has distinct practical rationalities, i.e., distinct kinds of disagreements and tensions (i.e., temporary breakdowns), as well as distinct ways of accomplishing reconciliation and affecting the subsequent practices (i.e., entwinement). These are (1) valuation practice of requirements adjustment, (2) valuation practice of cross-disciplinary adaptation, and (3) valuation practice of temporal pace-making and pace-keeping, each illustrated below.

We see the three valuation practices combined as continuously reconciling the diverse range of considerations brought into the project by different actors in an interrelated and practical manner (within the constraints and possibilities of the situated context), thereby enacting the project value.

4.1. Valuation practice of requirements adjustment

In all observed projects, the clients were inexperienced in terms of project sponsorship. This meant that they lacked the specialist knowledge and language to express their needs and priorities to the design team. As a result, adjustment of the project requirements between the client and the architect (representing the design team) was one of the main collaborative decision-making practices, mainly taking the form of meetings and corresponding follow-up communications (i.e., minutes and emails). In these meetings, the clients mostly expressed their requirements in terms of costs and time, while the architects also often raised technical and aesthetic considerations as requirements.

Given its early stage of design, where most detailed design decisions are missing, Project 1 provided the most explicit examples of this practice. To illustrate how acts of rating and weighing unfolded within it, we elaborate on a challenge discussed in the first observed meeting (ME-1.1), which was also followed up on in the minutes written up by the architect following the meeting (MI-1.1) and in email correspondence regarding the decision taken (EM-1.1).

(ME-1.1)

Client	See here, on this elevation, there is glass covering the staircase. Would it be possible to expose the staircase? Wouldn't this make it cheaper?
Architect	You need the fire glass so as to isolate the basement from the ground floor, allowing the space to be fire protected.
Client	Isn't fire glass more expensive? Could we have the separation of the floors at another point?
Architect	No. But perhaps we could redesign the stairs so that there isn't such a large area with glass. So, we could have glass in the basement and then only a glass balustrade on ground floor. Any other option of boxing the ground floor will be cheaper but won't look very good. Let's put it in for tender and then decide.
Client	Ok, but the best option is the cost effective one.

The client repeats that the “cheaper” and “cost effective” options would be preferable. These considerations prompt the architect to first express the reasoning behind the design proposal at hand, revealing the design team’s considerations about what to do and what ought to be done in technical terms (i.e., the fire safety), and then leads them to

propose a more affordable configuration which interweaves both the client’s and the architect’s considerations that were expressed. However, as the architect comes up with an amended design solution, this prompts another consideration in terms of the looks of the space. Thus, the valuation practice unfolds from one moment to another as new considerations about the costs and long-term use outcomes of project outputs (i.e., staircase, fire glass etc.) are expressed and implied within the flux of the interaction. Furthermore, it is clear from this episode that the valuation practice does not merely expose the preferences of the client and the architect but also implies what would be acceptable and unacceptable to them, and hence, continuously configures the boundaries of value at this early stage of design. It is apparent that the relation between the client (as the sponsor) and the architect (as the technical expert) are key to their expression of what they value and how much it matters, providing an example of how power is relationally constituted in valuation practices. Finally, the episode demonstrates that the fact that the situation takes place at an early stage of design has a role in the performance of valuation as both parties are being suggestive rather than conclusive as a final decision could be postponed to after the tender, allowing to keep both options open.

However, the minutes (MI-1.1) following the meeting stated that the client prefers the option that the architect suggested neglecting the boxing option that was discussed in the meeting.

(MI-1.1)

Architect	Client preferred to have glass balustrade at ground floor level (stairs to the basement).
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This prompted the client to revisit this alternative option in a subsequent correspondence, which reopened the discussion, as shown in the following excerpt.

(EM-1.1)

Client	I thought that we were having (fire) glass only at the basement level with the ground floor to be boxed in rather than replaced with glazing to save costs?
Architect	We mentioned that at some point, but I really think putting a wall up will completely destroy the space. We need to open up and make the descent to the basement inviting.
Client	I am concerned that we are adding further to the cost but I guess we will have to see what the tender prices come out at and value engineer at that stage.

While both parties make it clear that they maintain their initial positions, the architect opposes the less costly option in the minutes followed by the argument that the space would be ‘completely destroyed’ with the boxed option, signalling the severity of the architect’s concerns to the client. This in turn leads the client to start considering architect’s concerns as apparent in the last sentence.

Importantly, we observe that the unfolding practice is performed in relation to the project outputs (staircase, fire glass etc.), which empirically exemplifies how different considerations materialise in the decisions about project outputs through interactions in this valuation practice performed by the client and the architect. Hence, the entire sequence of interactions (ME-1.1, MI-1.1, and EM-1.1) is an empirical illustration of how project value is enacted through micro-level social interactions between the client and architect who disagree on what matters based on their situational understanding, and variously express their views as interrelated arguments on cost, project outputs and project outcomes, for the adjustment of project requirements.

4.2. Valuation practice of cross-disciplinary adaptation

To develop solutions that adequately meet the clients’ requirements, the multidisciplinary design team held meetings involving extensive discussions about the mutual alignment of different design disciplines. These were different from requirements adjustment meetings as they

involved cross-disciplinary adaptation. In these meetings, team members expressed their divergent concerns and preferences in seeking a solution that best fulfils the client’s brief and considerations. Importantly, during these discussions, the considerations from various specialists were performed and unfolded in a way that enabled overall system-level optimisation to meet the client’s requirements as much as possible, rather than each specialist trying to impose their own considerations on others. The following example demonstrates such an interaction amongst the design team: the architect, basement specialist and contractor negotiate the viable options of reconsidering the piping solution in the basement, while not increasing the project cost as instructed by the client.

(ME-2.1)

Contractor	Need to know the diameter of pipes to make a good judgement call about the required depth and length the excavation requires.
Architect	If we don't know the dimensions required, we cannot redesign need your expertise [points at basement specialist (BS)].
BS	Perhaps we could have a diverter.
Architect	We had tried that previously, but it didn't work.
BS	So, then we could drop the ceiling height to accommodate the length of the pipe.
Architect	Can save cost doing this option. However, we need to consider the depth issue with reaching the water level.
BS	In that case you can consider using piles instead, even though the costs may increase.
Contractor	How about underpinning instead, it can be considered as temporary works which is cheaper?
BS	The problem with underpinning is that you have to keep it dry, so if we don't know the level of the water it might not work as a viable option.
Architect	Also, underpinning will require further drawings, so it will increase both the costs and the completion date. As an alternative however, how about if we raised everything by 300mm? There is room for the head height in the basement to be reduced.
BS	You could drop the level of the main instead so the level of the height will not be affected.
Contractor	Only a water company can tell you the level of the water. If it's low, then we could just drop the main.
Architect	The ideal scenario would be to get rid of the piles and move the mains downwards.
BS	Yes, that is the most cost-effective option. If the pipe can be moved, great... If not, we need to do the piling option. We need to find out where the water is and then we can meet again to make that decision.

One of the most striking points in this episode is the overall framing of the discussion around finding the cheapest option based on the client’s instruction. This empirically demonstrates how the valuations performed as requirements adjustment are carried over to valuation practices of cross-disciplinary adaptation, and affect the logic of the practice, thus, framing the acts of rating and weighing within them. It also demonstrates how the power of the client, as the project sponsor, is re-enacted in this meeting based on his relation to other technical specialists, thus, framing the logic of valuation practice of cross-disciplinary adaptation even when he was not physically present in the meeting. In contrast to requirements adjustment practices, here, project team members come from different professional backgrounds providing them with specialist and complementary knowledge, which influences their considerations. Thus, as specialists contribute to the alignment through their acts of rating and weighing alternative project outputs, solutions with different advantages and disadvantages emerge, get shaped and discarded, ultimately paving the way towards a solution that would be acceptable to all the parties involved. It is also clear that being in technical design stage is an important part of the considerations as practitioners continuously note the implications of alternative solutions on the existing design decisions as part of their performance of valuation.

As illustrated in the episode above, in these practices, engaging in

acts of rating and weighing about the situation was the catalyst of the resolution, and key for various specialists to collectively establish the optimum system-level solution as highlighted by the architect below.

(ME-2.2)

Architect	I had one job where the contractor did not care and didn't take any initiative to propose solutions. His attitude was similar to Marcel Duchamp's quote: There is no solution because there is no problem. It was a very frustrating situation as I had to make decisions without the expertise so it made the process harder than it should have been.
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4.3. Valuation practice of temporal pace-making and pace-keeping

Due to the interconnectedness of collaborative decision-making practices in projects, it is important to achieve and maintain a synchronisation between the interactive valuation practices happening across the project. This was achieved through interactions that enabled pace-making and pace-keeping through noticing, communicating and addressing the bottlenecks, tensions and the exigencies of the project stage in the process of valuation as the one illustrated below from Project 1.

(ME-1.2)

Architect	He is so indecisive, making no decisions. We should have tendered already. Now the problem is delayed.
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As the excerpt above suggests, in the observed projects, clients’ power to sanction decisions on the project meant that the valuations at both ends of the client-project team dyad had to be in sync in order for the project to move forward. Given that the clients were inexperienced with construction projects, this often meant that they faced alternatives that they did not know how to relate to what matters to them; and thus, they did not know how to agree on a decision. For this reason, the project delivery team needed to enable the appropriate practical setting to assist the client in forming his considerations in order to progress the project and avoid delays. An example of such a situation is illustrated below.

(ME-1.1)

Architect	We need to get rid of the fixed island as the current clearance is not enough. Also, the bench is reducing the versatility of the space.
Client	Is it too much to have a table and a sofa?
Architect	A solution for you to have a flexible space which has an island, table and sofa would be to re-create the linear space into a U-shaped kitchen, with the table acting as an island. This will enable the rest of the space to allow for a sofa and more seating arrangements [drawing to show ideas].
Client	To be further convinced I would like some 3D drawings, as I cannot visualise the space as proposed at the moment. Also good to have these options in 3D.
Architect	Ok sure. I have to persuade you; this is the best option.

In this instance, the conversation was paused, as the client’s stated a lack of understanding of the situation, and so, he asked for an alternative representation (using 3D models instead of 2D drawings) which allowed for the conversations to progress.

The pacing of interactions was also dependant on the available number of choices to be made, which decreased significantly as projects progressed from conceptual design to detailed design and then to construction. The growing number of previous decisions in projects evolve the context of collaborative decision-making, reducing the number of options that can be considered without significant implications on direct costs, length of the project and availability of materials required. Therefore, as the project progressed, the logic of practice shifted toward emphasising the path-dependant nature of the emerging project value,

based on previous valuation practices that had materialised as decisions. For instance, in the following excerpt from Project 3, the architect did not want to include a new ventilation unit and was offering alternative solutions, while the engineer was firm that adding a new unit was the most meaningful solution at such a late stage.

(ME-3.1)

Engineer	To have sufficient circulation ventilation you will require a new unit and pipe to make it work.
Architect	How much will this cost?
Engineer	(sum) pounds.
Architect	That is quite a lot. How about we push the floor above slightly back to allow for trickle ventilation?
Engineer	No, that won't be a cheaper solution as the wires have already been built into the floor.
Contractor	How about we ensure that the windows on this floor can be opened?
Engineer	I am afraid that the one I am suggesting is the cheapest option. No other alternative I am afraid.

Nevertheless, we also observed several instances of project decisions being backtracked to a previous state when reaching an agreement was perceived as impossible. A good example of this happened in Project 3 in the construction stage. While construction was continuing on the site, the design team had to install an additional AC unit in the utility space. The team reached a consensus decision to solve the problem of locating the AC unit in the utility space, but doing so revealed a number of subsequent issues, which they worked out through cross-disciplinary team adaptation as illustrated below.

(ME-3.1)

Architect	Can we use this depth for the electrics metre and the AC?
Contractor	Yes, but the depth of the AC is more, so the space will seem disproportional with both in the same room.
Architect	Ok. How about the distance between gas and electricity?
Engineer	Not enough room, you need to leave a substantial gap in the utility room.
Contractor	How about placing it here, on this side of the wall?
Engineer	Yes, we could slightly adjust the timbers so that it would fit.
Architect	Could we move the timbers even more so that the AC can fit in here as well?
Contractor	That is possible. How about the AV racks? We need space for those as well.
Engineer	We could put the AV racks in the media room horizontally instead of vertically, so they don't take up space.

However, this agreement was reached in the absence of the client. Two weeks later, the client arrived on site and was not convinced by the solution being implemented, as storage requirements were an important client's priority. The following extract illustrates how the client vetoes the previously taken decision two weeks after a long decision-making process.

(ME-3.2)

Client	I need more storage in the utility space.
Contractor	We had a discussion two weeks ago about how much wiring is required to go here and how this is the optimum solution in terms of electrics and AC. That will mean that you won't get as much storage as you initially wanted.
Client	Storage is premium, anything you can do will be appreciated. [Contractor and architect look perplexed]

Even though the architect, structural engineer and contractor had reached an agreement, the client's reaction put this into question. This indicates that the agreement, which had apparently been achieved two weeks ago, and materialised as a specific configuration of project outputs, again became an issue.

(MI-3.1)

Architect	Client asked Architect to try and accommodate as much storage as possible in the utility.
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Despite much frustration by the project team, the consequence was that the project was placed in the context where it had been two weeks earlier. An important decision needed to be reverted and the project was reverted to a previous stage which enabled a larger space of considerations to be taken into account to better address the client's requirements.

5. Discussion

As illustrated by our findings, in practice, project actors do not experience actions and interactions as being explicitly about the project value - they don't talk about 'value' *per se*. Rather, they perform acts of rating and weighing that express what they value and evaluate the different options available to them, based on the practical rationality of the situation in hand (i.e., towards a practical end and depending on the project stage, interacting actors, previous discussions etc.). Thus, when considered together, the three presented valuation practices constitute and enact project value as manifest in everyday project decisions and tangible project outputs, which ultimately underpin wider issues that are commonly related to project value by the extant literature, such as project outcomes, performance, and benefits. As we illustrated, a focus on the sayings and doings during valuation practices disentangles the relations of mutual constitution in valuation practices, and exposes the practical rationality that determines their outcomes and ultimately the enacted project value.

For this reason, in the following, we elaborate on the three cross-cutting aspects that played a key role in configuring the practical rationality across the three observed valuation practices, in order to establish an understanding of project value as practice. These are 'relational constitution of project value as practice', 'temporality of project value as practice', and 'power in project value as practice'. By unpacking and discussing these issues in relation to the understanding of project value in the extant literature, we propose that they are key to the study of the project value phenomenon.

5.1. Relational constitution of project value as practice

The data from the valuation practices of requirements adjustment and cross-disciplinary adaptation expose how actors' competing or conflicting considerations create observable tensions that propagate across valuation practices in the project organisation and how their resolution shapes the tangible project outputs that underpin project outcomes and performance. It is evident in our findings that competing subjective and objective considerations reflecting different perspectives of value, such as cost (by the clients) and space quality and constructability (by the architect and engineers), are expressed, interwoven and evaluated together through the unfolding valuation practices of requirements adjustment and cross-disciplinary adaptation. Thus, the project value is relationally constituted across these two valuation practices, as they continuously configure each other's practical rationality by providing a material context, boundary, and scope (see ME-1.1 and ME-2.1).

The argument that project value is relationally constituted through unfolding valuation practices has at least three implications. First, it suggests that the variety of value perspectives that have been understood separately in the extant literature, such as the worth of the project and its deliverables (both immediate outputs and longer-term outcomes), the buyer's willingness to pay for the deliverable, and the commensurability of a project's outcomes with ideals and beliefs of what is good and right (Martinsuo et al., 2019a), co-exist in practice and manifest themselves as tensions between the project actors in

interrelated valuation practices. These different perspectives are variously expressed and co-evolve through unfolding evaluations in mutually constituted valuation practices. As such, they enact project value by addressing various value perspectives to different extents.

Second, the argument highlights that project value creation is iterative and pragmatic, which makes it difficult to understand and manage project value merely through structured organizational process-level approaches as developed by Pargar et al. (2019) and Fuentes et al. (2019). This implies the need to consider the key role of situated sensemaking in project value research and practice (Thiry, 2001), in addition to the current dominant understanding of project value creation, which is largely based on benefit management and strategic management at an organizational level (Aubry, Boukri, & Sergi, 2021; Laursen & Svejvig, 2016).

Finally, it emphasises the project front-end when the initial considerations of project value can act as a baseline and create paths of unfolding valuation practices (Aaltonen, Ahola & Arto, 2017). This argument extends the previous research on value creation at the front-end of projects (Liu et al., 2019; Martinsuo et al., 2019b; Zerjav et al., 2021) by highlighting that project value at the front-end must also be considered as an issue of governance and organisation. Only then can the relational constitution of value be adequately recognised and addressed as the project progresses to the subsequent stages of project life cycle. On the other hand, relational constitution of project value also highlights the challenges with realizing the value arguments established at the front-end of the projects across their lifecycles (Matinheikki, Arto, Peltokorpi & Rajala, 2016) and suggests the need for holistic life cycle approaches to the management of project value.

5.2. Temporality of project value as practice

Temporality has a key role in determining the practical rationality of valuation practices due to their unfolding nature. Projects are bound to be completed in a limited amount of time, which encourages fast-paced interactions and decision-making to prioritize action (Lundin & Soderholm, 1995). However, the unfolding nature of valuation practices suggests that every decision in the project constitutes an opportunity cost, as other decisions could have been made instead. Besides, the commitment of various parties to an agreement involves social investment and trust that they would not like to damage by reversing their decisions (Buvik & Tvedt, 2017). For this reason, the timings of interactive valuation practices become a key issue for the project actors. Hence, they organise the timing of interactions and agreements on various value considerations by a specific type of valuation practice for temporal pace-making and pace-keeping.

Notably, while the observed valuation practices of pacing created delays and caused backtracking in the project decisions, they do not suggest a bottleneck in reconciliation and the becoming of the project value, but their temporal complexity. As indicated in ME-1.1, pausing a decision might mean that achieving agreements might require different kinds of representations and artefacts to facilitate negotiations. Or as demonstrated in ME-3.1, pacing can be fast merely because the constraints deriving from previous decisions leave only a single way forward.

Previous research found that accelerating projects does not constitute project value in itself (Svejvig, Geraldi & Grex, 2019). Our study contributes to this notion by empirically demonstrating that it is the timing of interactions and decisions, not their overall pace, that affects the scope and extent of the reconciliation, thus affecting the becoming project value. McGivern et al. (2018) suggest that project actors actively engage in 'temporal work' to impose their own temporal interests and orientations on projects to shape the construction of problems, which, in turn, legitimates tasks and time frames. The valuation practices of pace-making and pace-keeping vividly demonstrate how such temporal work is performed in practice to affect the temporality of valuation practices, which is a key aspect of the practical rationality affecting the

reconciliation and becoming project value.

5.3. Power in project value as practice

Our analysis suggests that the power that project actors possess and can enforce over each other determines what is being evaluated in a decision situation, and so, how valuation practices unfold. Thus, the power of influencing what is problematised or highlighted in a valuation practice determines the scope and extent of the situational agreement that can be achieved, which affects the unfolding of valuation practices, and eventually, the enactment of the project value. In the observed projects, for the clients, it is the role as the project sponsor who pays others that constitutes a major source of power. For the design teams, it is specialist knowledge and the use of specialist representations that configure their relationships with others, and so, constitute their major sources of power in affecting the valuation practices.

It is evident that these different relational powers shape the logic of valuation practices through their implication in tensions and negotiations. They also determine the scope and extent of the resulting temporary agreement. The client's power as the employer of the design team, the design specialists' power stemming from the institutions of professionalism, and the client's reliance on the design specialists' views and representations play their part in achieving a temporary agreement. At the same time though, power can also be used to undo a previous temporary agreement, such as when a client vetoed an already taken decision using his power as the project sponsor. In either case, the relational power appears as an important determinant of the logic of practice by determining who can say and do what, thus, ultimately affecting the unfolding valuation practices and the becoming of the project value.

While project value as a multifaceted phenomenon requires a serious consideration of the power and politics in project settings, there has been a paucity in this line of research (Martinsuo et al., 2019a). Power has mainly been an interest to stakeholder engagement and megaproject studies in project research, where it is predominantly defined as something that is possessed and can be used to bring about desired outcomes (e.g., Aaltonen, Jaakko & Tuomas, 2008). However, our findings align with work which suggests that power is relational and manifests in social relationships as well as in the materiality of practices through defining the space of meaningful and legitimate arguments (Chow & Leiringer, 2020; Feldman & Orlikowski, 2011). Thus, in line with this latter perspective on power in project settings, we argue that more attention should be paid to the relational ways in which power is manifested in project practices to better understand and intervene in the becoming of the project value.

Finally, Fig. 1 depicts our formulation of project value as practice. The cornerstones of this formulation are the valuation practices of requirements adjustment, cross-disciplinary adaptation and temporal pace-making and pace-keeping, which accomplish reconciliation between the project actors and constitute the project value. This formulation acknowledges that, rather than being tackled explicitly in project decision-making, project value emerges through practices of valuation which involve confronting various views on what is important and what needs to be done under uncertainty and time pressure. Therefore, project actors' diverse considerations manifest as situation-specific disagreements and tensions which need to be reconciled in practices to move the project forward. These disagreements and tensions arrive at closure through temporary agreements, which do not only determine what to do next but also when. Subsequently, new decision situations arise following from the previous temporary agreements, and going through the same cycle, they enact further decision situations triggering further valuation practices. Importantly, these valuation practices are situated in the sense that they depend on a practical rationality configured by their relation to other valuation practices, their temporality, and the power relations involved. Ultimately, what these valuation practices accomplish is to reconcile the diverse sets of

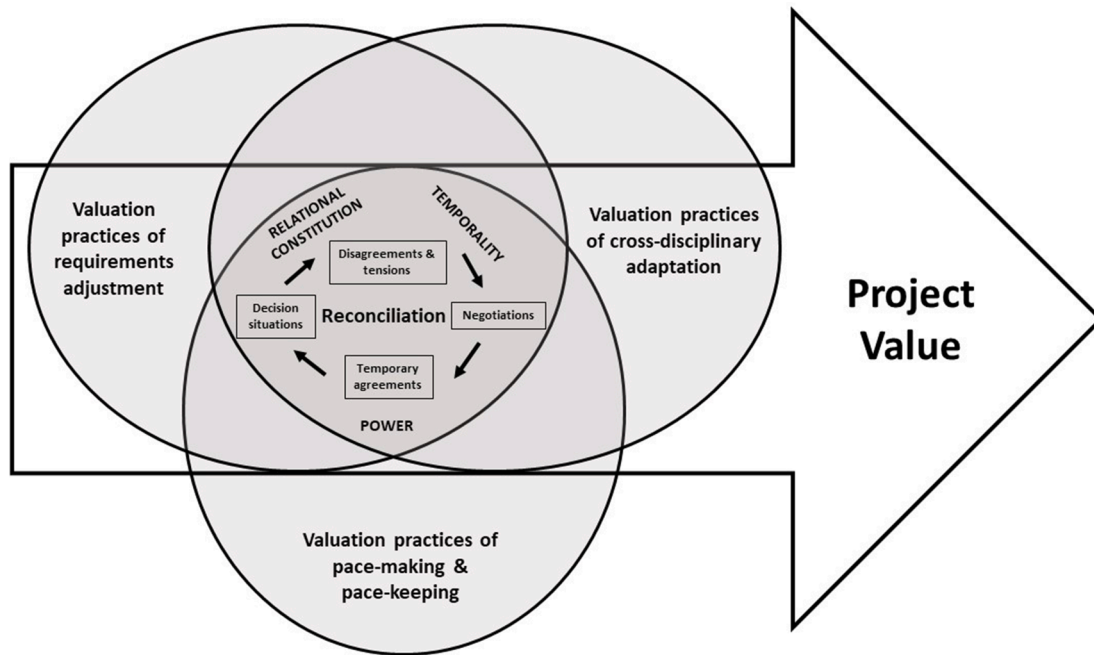


Fig. 1. The constitution of project value as practice.

considerations brought to the project by various actors, and to enact the project value on an ongoing basis.

6. Conclusions

The notion of value has long attracted the attention of project scholars. Through the movement of ‘rethinking project management’, a stronger emphasis has been put on ‘value’ to move away from formulating the success of projects in terms of time, cost and quality (Svejvig & Andersen, 2015). Our research adds to the growing literature on project value by adopting a projects-as-practice approach to the study of the project value phenomenon. We provide a practice-level empirical account of how project value emerges on an ongoing basis as various actors make sense of, negotiate, and agree or disagree over unfolding project-related issues as part of their everyday work. Such a practice-focused formulation considers project actors’ situated activities of valuation driven by a practical rationality as central to understanding the project value phenomenon. It adds to the extant literature on project value which mainly understood value as ‘being’, rather than ‘becoming’, through mutually exclusive subjective and objective formulations of value (Martinsuo et al., 2019a). Hence, the two main contributions of the paper are 1) the practice-based theoretical frame developed from the previous literature on valuation practices (Kornberger, 2017; Muniesa, 2011; Orlikowski & Scott, 2014) and organisational studies (Feldman & Orlikowski, 2011; Nicolini, 2009; Sandberg & Tsoukas, 2011) to study project value as practice, and 2) the new insights on project value with implications for research and practice.

Regarding the first contribution, our study provides the conceptual foundation for future studies of project value based on practice theory by proposing a focus on practices of valuation (i.e., the verb) to make sense of the project value phenomenon. This shifts the focus to the messy everyday interactions and the ways in which they unfold to make the project value what it is. The argument that valuation practices continuously unfold to enact the project value, and are situated, implies the need for future studies to pay attention to the mundane details of practices and how they affect the practical rationality, i.e., the performance and unfolding of valuation practices.

Regarding the second contribution, our research presents three distinct, but interrelated, nexuses of valuation practices accomplishing

the reconciliation in the observed empirical setting, namely requirements adjustment, cross-disciplinary adaptation and temporal pace-making and pace-keeping. As we highlighted in our discussion, the relational constitution of these practices, their temporality and the power relationships involved appear as the three cross-cutting aspects that played a key role in configuring the practical rationality across the observed valuation practices, and thus, in determining the achieved reconciliation and the enacted value. Further research is needed to validate the three distinct valuation practices proposed herein, as well as to provide more nuanced understandings of them and explore potential additional ones, in different contexts where the situated logic of practice might be configured differently. Besides, based on our discussion, we call on future project value research and practice to consider relational constitution, temporality and power as key to the understanding of the project value phenomenon. This suggests that future research should further explore the impact on project value of the way in which project practices are organised (i.e., assembled, interrelated etc.). Besides, the impact of various means of power in social interactions (e.g., knowledge, institutions, representations, artefacts etc.) on project value should be analysed. Finally, research should address the impact on project value of objective (e.g., the project plan) and subjective (e.g., actors’ sense of urgency) understandings of project time.

This research has some limitations in terms of its context as well as the amount of data used and the nature of the analysis. First, our study is limited to one particular type of project-based business, that is small scale residential building projects. Different types and scales of projects might present different valuation practices and different types of practical rationalities that underpin them. Second, our analysis uses a qualitative approach, and it is based on a limited amount of observational data. For these reasons, the data and analysis may not be representative of similar settings. Particularly, negotiations in different cultures with different levels of directness (as studied in intercultural communication) would lead to different outcomes, and the analysis hinges on the correct cultural reading of the situation.

Nevertheless, the proposed practice view on project value informs the ongoing lively conversations on project value by enabling a novel account of the project value phenomenon based on practitioners’ lived reality.

Declaration of Competing Interest

None

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