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Organizing long duration interdependence in Lloyd's of London: *Persistence in a part-whole paradox of organizing*

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ABSTRACT

A critical challenge for interorganizational groups is to organize themselves in a way that balances the interests of the group as a whole and those of individual participants. How interorganizational groups manage these 'paradoxes of organizing' to ensure long-term survival remains, however, unclear. We investigate this phenomenon through a historical case study of Lloyd's of London, arguably the most prominent and long-standing interorganizational group in the global insurance industry. Our historical analysis shows that the interdependence between the group as a whole and its participants deepened progressively over more than two centuries as collective organizing solutions were adopted and were managed by a central collective actor. We develop a process model of dynamic management of part-whole interdependence which explains how the cumulative development of an infrastructure of interdependence, incorporating increasing responsibilities of the central actor, enables management of the paradox of organizing throughout its persistent historical manifestations and inherent tensions.

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studies; long duration;
persistence

Individually we are underwriters, collectively we are Lloyd's.¹

Introduction

Groups of interdependent organizations—including innovation ecosystems, supply chain networks, and cooperatives—have existed for a very long time (e.g. Roberts & Arnander, 2002; Rollings, 2021). This type of organizing is increasingly widespread in the wake of pressures stemming from globalisation, technological change, and socio-environmental issues. Such groups must manage the 'paradox of organizing' (Clegg et al., 2002; Smith & Lewis, 2011) with its persistent tensions between the interests of the group as a whole and of individual participants, as they play out between central power and local autonomy, or between collective value creation and individual appropriation (see Provan et al., 2007 for a review). Managing these tensions is a dynamic process as matters of organizational design

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must be repeatedly reconsidered in the face of contradictory yet interrelated elements that persist over time (Raisch et al., 2018; Smith & Lewis, 2011). Without this ongoing process, imbalance between the persistent paradoxical tensions might generate fragmentation that threatens the long-term viability of the group (Jarzabkowski et al., 2021). The dynamics through which these tensions are managed over the long duration of history thus present opportunities for novel insights.

Interorganizational groups represent an extreme case of the paradox of organizing (Jarzabkowski et al., 2019), because they are not bound together by a hierarchy that imposes integration of the parts within the whole (Provan et al., 2007). Studies have identified some components of processual responses to paradoxical tensions in interorganizational groups, for example how paradoxical tensions are made salient (Knight & Paroutis, 2017), and how cycles of balancing and re-balancing paradoxical tensions can strengthen the viability of interorganizational groups (Jarzabkowski et al., 2021). However, while interorganizational systems of paradox management are unlikely to be self-balancing (Bengtsson & Raza-Ullah, 2017), little attention has been paid to where or how paradox management takes place within such groups. The locus of coordination and decision-making varies in different interorganizational settings. For example, technology ecosystems often have a dominant hub firm responsible for governance and decision making (e.g. Wareham et al., 2014), global supply chain participants have financial interdependence, with governance *via* contracts (e.g. Schrage & Rasche, 2022) and some groups have a network administrative organization (Provan & Kenis, 2007) that coordinates but cannot compel action or exert formal authority (e.g. Jarzabkowski et al., 2021). Furthermore, existing literature typically considers studies over relatively short time spans and thus treats these different forms of coordination as stable contextual features, rather than potentially dynamic components of the interorganizational system itself. We therefore take a long duration, historic perspective extending the focus of paradox research to investigate paradoxes of organizing across a system of interorganizational relationships as they unfold over time (Clegg et al., 2002).

Our study is based on the case of Lloyd's of London, arguably the most prominent interorganizational group in the insurance industry. Established in the late seventeenth century, paradoxical part-whole tensions are inherent to Lloyd's historical development. We use archival sources spanning over two centuries to trace the growing interdependence between Lloyd's as a whole and its participants, during which a central organizing actor emerged and evolved. Our study shows that interdependence shapes, and is shaped by, the development of collective organizing that accommodates the interests of the parts even as the whole becomes stronger and pressures to fragment increase (e.g. Das & Teng, 2000; Jarzabkowski et al., 2021).

We contribute a process model of dynamic management of part-whole interdependence that explains how interorganizational groups survive long term through a cumulative process of navigating the persistent part-whole paradox of organizing. Specifically, cumulative responses to the tensions between the parts and the whole, as they manifest recurrently throughout history, strengthen interdependencies between the parts and the whole, overcoming inherent tendencies towards fragmentation (Cunha & Clegg, 2018). We show that as collective organizing and a central organizing capability develop—which we term an infrastructure of interdependence—so does the group's ability to respond to and incorporate the interests of the parts while strengthening those of the whole. Thus, interdependence,

and the capacity to manage that interdependence, is fundamental to navigating persistent paradoxes. We extend understanding of responses to paradox (e.g. Jarzabkowski et al., 2013; Smith & Lewis, 2011) by locating responses within both the prevailing historic context and the series of events to which they are connected (Maclean et al., 2021) allowing us to trace paradoxical tensions as they move between phases of latency and salience. Our study thus answers calls for paradox theory to pay more attention to time and history (Andriopoulos & Gotsi, 2017; Putnam et al., 2016) and to deepen understanding of the dynamics of paradox persistence and management (Cunha & Clegg, 2018).

Theoretic framing

Coordination of organizational structures and activities has long been a key challenge in organizational theory (Thompson, 1967), required to maintain interdependencies between the parts of the system and the system as a whole (Van van de Ven et al., 1976). These coordination challenges have been studied through a paradox lens, framing them as paradoxes of organizing. Paradoxes of organizing arise from the ongoing tension present in a system comprised of parts which act independently yet are also interdependent and cohere as a collective whole (Clegg, da Cunha, and Cunha 2002; Jarzabkowski et al., 2013; Smith & Lewis, 2011). Parts-whole tensions recognise that while parts benefit from membership of a collective, organizing requires subjugation of the parts to the whole (Smith & Berg, 1987).

Longitudinal perspective on the management of paradoxes of organizing

Paradoxical tensions are neither resolvable, nor static (Cunha & Clegg, 2018). Tensions periodically become salient under changing contextual or temporal conditions. For example, R&D alliances face the recurrent challenge of managing the tensions between collective value creation and individual value appropriation (Ritala & Stefan, 2021). Such moments of paradoxical salience trigger responses to the tensions raised (Raisch et al., 2018; Smith & Lewis, 2011) and these responses may vary according to different manifestations of the paradox and over time. Consequently, paradox management unfolds through the pattern of responses over time, not the responses to individual issues (Raisch et al., 2018; Smith, 2014).

While the management of paradox is a dynamic process, existing studies examine responses to paradoxical tensions over relatively short periods of time, typically well under ten years (e.g. Jarzabkowski et al., 2013; Knight & Paroutis, 2017; Lüscher & Lewis, 2008). The duration of such studies does not explain how the ongoing management of tensions might stabilise or undermine a system over the long-term. A historic approach, by contrast, offers a richer explanation of responses to, and management of, paradoxes of organizing. Scholars have long been puzzled by the organizing paradox inside organizations. Yet Clegg et al. (2002) show that the paradoxes of organizing go beyond organizations to the wider system of interorganizational relationships and unfold over very long periods of time that are not evident in the relatively short durations considered in typical studies of management and organizations. Historical analysis allows us to explore the dynamics of these wider organizing paradoxes, considering how interorganizational relationships affect stability and change over the longer duration.

Historical perspectives view events as temporally situated, meaning that events are interpreted as chains of causation, considering both influences from the past and their influence into the future (MacLean et al., 2016). In the case of long duration paradoxes of organizing, historical analysis emphasises the influence of prior responses to the management of paradoxical tensions on subsequent responses. Existing literature has drawn attention to the value of a historic approach in identifying how paradoxical tensions emerge when past practices are deployed in response to problems of the present (Pierides et al., 2021). We seek to extend this use of a historic perspective beyond paradox emergence to illuminate the puzzle surrounding the temporally situated nature of paradox persistence. Persistence is the often neglected third element of the classic definition of paradox as '*persistent contradiction between interdependent elements*' (Schad et al., 2016). The dynamics of paradox persistence are not yet well understood (Cunha & Clegg, 2018) and we posit roles for both paradox latency and cumulative paradox management. First, despite their persistence, paradoxes will not always be salient, meaning readily observable as active moments of tension (e.g. Bednarek et al., 2017; Knight & Paroutis, 2017; Lê & Bednarek, 2017). A historic approach ensures that we do not mistake the latency of paradoxical tensions for their absence. While short duration studies tend to focus on those moments when paradoxical tensions are salient, latency remains a key feature of the system through which paradoxes to persist, dormant and unobserved, over time (Smith & Lewis, 2011). By understanding events as embedded in a temporal context and in particular socio-historic times and places (Rowlinson et al., 2014), we can juxtapose periods of salience and latency across time (Jarzabkowski et al., 2018), studying how paradoxes persist during periods of latency, and how they move between and morph over recurrent periods of salience.

Second, and relatedly, responses to paradoxes during periods of salience build on prior actions (Raisch et al., 2018). A long duration historic study can go beyond individual responses to paradoxical tensions at moments in time, to examine the organizational infrastructure that develops around managing this ongoing and potentially changing series of responses as they recur over time. By observing the temporal dynamics and nature of responses to paradoxical tensions through the long lens of history, we can apprehend the system within which they operate (Jarzabkowski et al., 2019; Schad & Bansal, 2018) and how the specific form of the tensions may evolve over time. In particular, what appears as a swing towards one pole of the paradox, or a singular response to managing a salient tension, may be tempered when considered within a long duration series of events that are temporally interconnected into a pattern of part-whole organizing.

Part-whole tension in interorganizational arrangements

Contradictions and interdependencies are rife in interorganizational systems, with resultant tensions arising not only between participant organizations but also between participants and elements of the interorganizational system itself (Jarzabkowski et al., 2019). The paradox of organizing, in terms of tensions between the parts and the whole, is exacerbated in interorganizational groups, where the responsibility for managing paradoxes may not be clear (e.g. Jarzabkowski et al., 2021). For example, there may be no single actor with authority for the group as a whole (DeFillippi & Sydow, 2016), or only certain participant activities may

be within the scope of the interorganizational arrangement (Lavie et al., 2010). Furthermore, interorganizational arrangements can range from being fully contractual, such as a pharmaceutical collaboration (Vedel, 2021), to fully voluntary, such as multi-country disaster recovery pools (Jarzabkowski et al., 2021).

While different forms of collective organization and governance have been identified (Provan & Kenis, 2007), we know relatively little about the emergence, development, and operation of actors with organizing responsibilities within interdependent groups of organizations (Altman et al., 2022). The relationship between participants and the body that holds organizing responsibilities is an important, but little studied, component in the unfolding pattern of responses to the part-whole tension in interorganizational systems. For example, the organizing body may shape decisions that locate activities, structures, and solutions as more proximate to the interests of either the parts or the whole. These decisions may exacerbate the tensions in, or support the stability of, the interorganizational system. Focus on an organizing actor's changing role and relationship with group participants over the long duration may, therefore, identify important dynamics in paradox management in interorganizational systems.

Our paper aims to study the management of such part-whole paradoxes over a long historical duration. We investigate the theoretically-informed question of *How does the cumulative management of interdependent part-whole tensions shape the pattern of organizing within a longstanding interorganizational group?* By incorporating historic and temporal sensitivity into the study of part-whole organizing tensions, we aim to contribute to knowledge of the management and persistence of paradoxes of organizing.

Research design and methodology

We explain the long duration management of part-whole tensions through the development of an analytically structured corporate history. This methodological approach is both historically and theoretically informed, explaining the focal phenomenon through a narrative driven by concepts, events, and causation (Rowlinson et al., 2014). We undertake a critical analysis of both documentary (i.e. record-keeping, such as meeting minutes, membership records, codes of practice and regulations) and narrative (i.e. emplotted documents such as in-house newsletters, strategic reviews, corporate histories, and commentaries) archival sources (Heller, 2023). We use this analysis to construct a narrative history of collective organizing which incorporates theoretic interpretation of events and actions to explain the unfolding management of part-whole tensions. Our inductive approach allows us to use original sources to investigate the role of time in a case selected because of the observability of phenomenon of interest (Carton, 2018).

Research context

We use an archival data set spanning over 250 years to understand the dynamic management and persistence of the part-whole paradox in the theoretically relevant context of the Lloyd's of London insurance market. Participants became increasingly interdependent with the group as a whole throughout Lloyd's historical development. In the early eighteenth century, participants (wealthy individuals) co-located informally in a London coffee house where they

shared shipping intelligence and some customary marine insurance trading practices. In the late eighteenth century, accompanying a move to dedicated trading premises, the control of premises and shipping intelligence transferred from the owner of the coffee house to an elected committee of participants.² We take this as the emergence of the first collective organizing and from this point elements of parts and of whole co-exist. Over time, many more collectively organized, interconnected, features were agreed, including aspects of governance, operations, mutualization of some losses and more recently, certain aspects of infrastructure and market development. In 2021, Lloyd's participants wrote over £39bn of insurance premiums and, if treated as an entity, is one of the largest specialty insurers globally.³

For the purposes of this study of the management and persistence of part-whole tensions, we define 'the parts' as underwriting participants in the Lloyd's of London insurance market. Participants were initially individuals, then groups of individuals, then organizations. Participation may be in the form of investment ('Members') or underwriting agencies ('Managing Agencies'). Given the bespoke nature of some Lloyd's terminology, we use the term 'participants' throughout the paper for simplicity and consistency.

Central organizing actor

The development of collective organizing was associated with the emergence and development of a central organizing actor. The earliest incarnation was an informal group of frequenters of Lloyd's Coffee House who, in 1769, decided to move to new premises to distance themselves from others undertaking '*gambling and scandalous speculation*'.⁴ The move required the transfer of an agreement with the Post Office to deliver shipping intelligence at no cost, and of the production of a shipping intelligence newsletter. Shortly after, in 1771, 79 merchants, underwriters and brokers agreed to pay a subscription and elected a committee of nine to establish dedicated trading premises.⁵ In 1811, the combination of pressures arising from the past decade's growth and a specific event relating to the failure to share shipping intelligence, led to more formalization. A working party developed a governance framework and set of regulations, and all participants signed a Trust Deed which moved the Committee's basis of power to a legal footing.⁶ Since 1871, the Committee's responsibilities have been prescribed by legislation and byelaws.⁷ Today its responsibilities include participant performance oversight, group-level financial security, provision of shared services and infrastructure, and Lloyd's overall strategy and development.⁸

The central organizing actor is the body which comes to represent the interests of 'the whole' in our study of the persistence of part-whole tensions. The role and responsibilities of the central organizing actor (which has gone by multiple names, but which we will refer to as The Committee) have grown by increment. Over time the Committee has changed from enacting the wishes of participants to being responsible for the interests of the whole, while still being required to consider the interests of participants. Throughout history however, Lloyd's has remained a group of independent, competing participants. On-line [Appendix A](#) tracks the changes in the Committee's role, responsibilities, and composition. On-line [Appendix B](#) tracks the changing relationship between participants and the Committee.

Data collection and analysis

We spent four months on-site collecting data from Lloyd's Corporate Archives and on the contemporary organization. We supplemented this with publicly available information

orientation and nature of this data. The breath of source materials allowed us to triangulate data and build a fuller picture of how different actors participated in the unfolding events.

As a first analytic step, we drew from this large pool of source material to construct a relevant data set by identifying and extracting all references to collective organizing at Lloyd's. We took a broad interpretation of collective organizing, including: common practices (e.g. policy wordings), collective decision-making (e.g. on premises expansion), centralised practices or structures (e.g. policy processing). Based on this analysis we noted what we termed foundational collective organizing, the core of which was the development of shared trading premises and shipping intelligence (see Figure 2), around which individual insurance underwriters became interdependent. These core foundational elements led to more specific collective decisions and structures (for example, payment of membership fees, lodging of security deposits), which gradually introduced more collective organizing. We also included 'non-collective' organizing in the data set, seeking intentionally individual practices, decision-making, and structures (e.g. participation duration; which insurance risks to accept). In line with an analytically structured corporate history approach (Rowlinson et al., 2014), we used these data to establish a timeline of the emergence of collective organizing, which we defined as aspects of Lloyd's organised in such a way that they are either a) *common to all participants* through custom or mandate or b) *centralized* and operate at the level of Lloyd's as a whole.

Secondly, we traced the growth in responsibilities and change in form and composition of the central organizing actor. We searched for data articulating how the organizing actor's role related to individual and collective interests. We then mapped the development of collective organizing and the development of the central organizing actor to the temporal periods identified when constructing the timeline.

Thirdly, as we analysed these data, four elements of collective organizing (partial mutuality; collective trading rights; central policy administration; business plan oversight) emerged that represented management of the part-whole paradox in four different aspects of Lloyd's operations. Figure 2 is a timeline showing the development and increase in Lloyd's collective organizing. Such collective organizing requires participants (which from the late nineteenth century included individuals organized into groups) to give up a level of autonomy to support

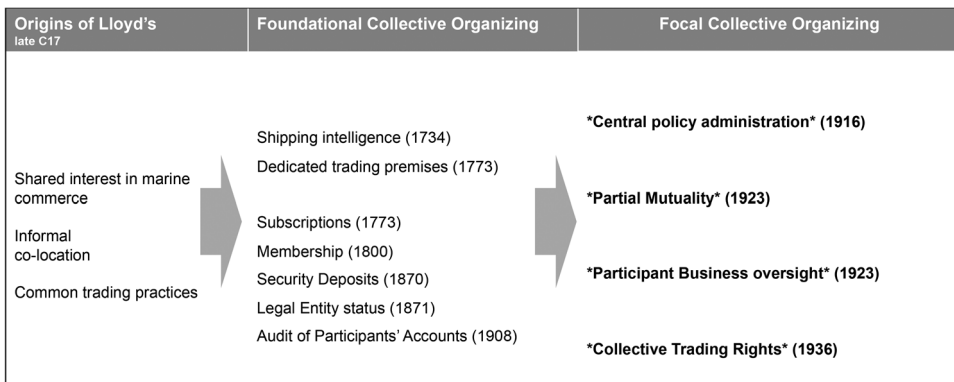


Figure 2. Timeline of the development of collective organizing at Lloyd's. Dates are when some form of collective organizing related to that aspect first implemented.

the interests of Lloyd's as a whole, for example by agreeing that certain processes would be conducted centrally.

These four focal elements arose alongside the growth of the group of interdependent insurance underwriting organizations. Consequently, these elements developed in the presence of part-whole tensions. We revisited our data set to study the development of the focal collective organizing in detail. We wrote narratives of the development of each element focusing on the moments of salience, conflict, and response development connected with part-whole tensions. We reviewed these narratives to identify: how the tensions manifested; how participants and the central actor made sense of the tensions; the mechanisms and reasoning used in determining responses to contestation between the tensions; and the consequence of the responses for the central actor, participants, and for Lloyd's as a whole. Consistent with others analysing long duration historical datasets (Maclean, Harvey, & Suddaby, 2021) this allowed us to analyse the development of the collective organizing, and the responses to—and accommodation of—part-whole tensions, over time.

Finally, drawing from the above analyses, we conceptualised the development of collective organizing and of the central organizing actor as intertwined in what we term an infrastructure of interdependence. We define an infrastructure of interdependence as the set of interconnected elements of collective organizing operated by a central actor with responsibility for the interests of both the parts and the whole. This infrastructure both manages and maintains the tensions between the interests of the parts and of the whole over the long term.

Findings

We trace the emergence and development of four aspects of collective organizing at Lloyd's (see [Figure 2](#)), shaped by intermittently salient tensions between the interests of Lloyd's participants and of Lloyd's as a collective entity. We present our findings in the form of analytical narratives (Rowlinson et al., 2014) of the development of each of the four aspects. In the interests of parsimony, we tell two narratives in full and two are summarized in tabular form. The narratives of each aspect of collective organizing, while unique in the specific events and contextual pressures that form their historic story, follow a similar pattern of conceptual employment. For each, a combination of contextual factors and a specific problematic event resulted in participants' acceptance of a proposal for collective organizing, despite previous rejections of such collective solutions. These events occurred at different points in time, in response to specific challenges that made tensions salient between individual participants and Lloyd's as a whole. Each such occurrence prompted the emergence of a different aspect of collective organizing.

We first trace the development of the four aspects of collective organizing individually, then explain how they are interrelated and are interdependent with the developing role of the central organizing actor. As the Committee's practical role in administering the growing set of collective solutions increased, it became increasingly responsible for protecting and promoting the interests of Lloyd's as a whole. Yet the interests of the parts remained influential, not only in shaping elements of collective organizing, but in sustaining individualised participation in the market, legally and financially. While the balance of interests shifted over time towards those of Lloyd's as a collective entity, the interests of the parts thus continue.

These interests are exerted through the relationship between the participants and the central actor, which changed over time from that of direct participation in an administrative arrangement, to one of several stakeholder groups managed by a leadership body. Hence, the intermittently salient part-whole tensions, prompted by the different trigger events and addressed through new aspects of collective organizing, incrementally grew the scope of such organizing, which in turn grew the role of the central organizing actor. Yet this growth in collective organizing did not negate the underlying part-whole tensions, as each element of collective organizing must also accommodate the evolving interests of the parts. The elements of collective organizing are interconnected through beneficial relationships which enable coordination, complementarities, or constitute antecedents to future collective organizing.

Collective organizing element one: partial mutualization (from 1810)¹¹

Contextual conditions leading to emergence of collective organizing

The Lloyd's market's reputation for financial stability was an important factor driving the emergence of collective organizing. Lloyd's participants are individually liable for losses on their insurance business. The financial security behind an insurance policy rests on funds comprising the premiums paid for policies and additional capital provided by each participant. Until the mid-nineteenth century, each participant made their own decisions concerning such funds and the security of a policy was a matter of judgement for insurance purchasers. A proposal made in 1810 for *'the more respectable underwriters to distinguish themselves from those they have considered as not so deserving of credit, by some subscriptions of stock or other means'*¹² was dismissed as impracticable.¹³ By the 1860s, Lloyd's participants were subject to competition from the new marine insurance companies that had been founded over the past decade.¹⁴ The competition led to rate-cutting, and many Lloyd's participants failed. Consequently, the financial stability of participants became a concern for the Committee. The Committee's requests for new participants to deposit funds for security became increasingly formalized, becoming mandatory in 1870.¹⁵ This was the first common practice supporting the security of a Lloyd's policy.

Between 1870 and 1891 participants' deposits were sold to fund underwriting debts on only six occasions, but from 1900, the number of incidents began to increase. The most severe was in 1903 when a participant misused the funds provided by the five other participants in his syndicate leading to their financial ruin and unpaid claims on policies.¹⁶ This incident and other less serious failures *'caused harm...[and]...touched the great name of the [Lloyd's trading] Room'*¹⁷ as concerns were raised in the national press in the US and UK.¹⁸ In 1908 the committee designed a scheme for a mandatory annual audit of participants' accounts, based on a practice already used by one leading participant to protect business he placed with other participants.¹⁹ Participants were initially divided in their opinion of the scheme, and the Committee had no power to mandate its introduction. However, support from highly respected participants and continued external pressures led to the scheme being carried by a unanimous vote at a meeting of members in late 1908.²⁰ A further security measure was agreed at the same time, whereby all premiums would be placed in trust. The changes introduced in support of the security of the Lloyd's policy—lodging deposits, submitting to an annual audit, placing premiums into trust—were common practices, brought about by the agreement of participants. These structures and processes, carried out by

participants individually, had the objective of supporting the collective reputation of Lloyd's and were underpinned by an increasingly collective framing of the security of 'a Lloyd's policy'. Underwriting losses however, remained the responsibility of individuals.

Problem triggers salience of part-whole tensions and participants accept a collective solution

The principle of individual responsibility for losses was first breached in 1923. A participant's extensive fraudulent activity came to light and Lloyd's Committee Chairman asked all participants to contribute to the payment of the losses: *'if we do not pay these bills, the name of Lloyd's will be seriously injured and will never recover during our lifetime.'*²¹ Participants were aware that they had no legal obligation to pay the debts, nor did the Committee have any power to make them pay.²² The motion was put and while there was disagreement about how the debts would be spread across participants, there was no dissent to the proposal. Within days an agreement was reached, and funds were with the Committee.²³ The voluntary mutualization of the fraudulent losses was a demonstration that participants felt their individual interests in a strong reputation was interdependent with maintaining Lloyd's collective reputation:

...in the developments of our time it has become evident that if one member suffers, all suffer with him. It is recognised that the good name of Lloyd's is a great trust, and there has grown up an esprit de corps which has shown itself capable of bearing a strain which might well have been considered insupportable.²⁴

Having acted once to mutualize losses on an ad hoc basis, measures were introduced to formalise arrangements for future situations. Thirty years previously, a scheme for a *'fund [that] would be liable to meet deficiencies of underwriters and, unlike the deposits which are individual, [and] would form a joint or common guarantee fund'*²⁵ had been put forward by an influential participant, but was rejected. Following the collective response to the 1923 fraud and increasing concern with the collective reputation of Lloyd's, a similar scheme was proposed and accepted. In 1927, the central fund was formally established.²⁶ All participants made an annual contribution to the fund, from which losses which exceeded the full resources of liable participants could be paid. The central fund was not intended to be a component of the developing annual solvency and security framework to which Lloyd's participants were subjected. Nor was it seen as a fundamental change in the core organizing principle of Lloyd's as a market of individual participants with responsibility for their own losses. Rather, it was *'voluntarily brought into being at Lloyd's quite independently of any statutory requirements or the British Government, and is in addition to and no way connected with the safeguards which all Members are required to provide individually and personally.'*²⁷ The central fund is not mentioned in a contemporaneous text describing the security of Lloyd's,²⁸ nor does it feature in a discussion of individual underwriting and the various mechanisms of security that sit behind an official Lloyd's policy written in 1952.²⁹ Consideration of these sources, suggests that the central fund was viewed only as a formal mechanism for accruing funds to allow a collective response to extreme losses to protect Lloyd's collective reputation:

...thus, in the remote event that any Member, despite the vigilance of the audit, should prove unable to fully meet his underwriting liabilities out of his Underwriting Funds, his private resources, any deficiency which arose could be made good by the Central Guarantee Fund.³⁰

The new fund did not replace the principle of individual liability but was administered with some flexibility and allowed temporary deviation from the principle. For example, in 1958 the Committee agreed for a loan to be made from the central fund to allow participants suffering heavy losses from third party liability insurance claims to remain in business. The Committee made clear that this was a loan, not mutualization of a loss, and would be repaid.³¹ Nonetheless, Lloyd's participants had now agreed the principle that, in certain circumstances, mutualization of losses across all participants was appropriate. This was accepted because of the importance placed on the collective reputation of the market rather than as an explicit, intentional step away from individual participation.

Recurrent salience of part-whole tension shapes the role of the central actor and the evolving collective organizing

Multiple attempts have been made to extend the scope of collective liability beyond only the most extreme losses. Such proposals were rejected to protect the principle of individual participation. In 1969, a proposal was made to alter the balance of individual and collective liability for losses. Under the proposal, collective resources would 'come before' the individual resources of participants in the payment of large losses. Few participants were supportive of the scheme. Consequently, it was rejected by a delegated group of the Committee. The proposal exposed participants' views on the appropriate parameters of mutuality within Lloyd's: they did not want to move towards a model of collective liability and the risk of '*having to help each other out at such an early stage*' or of having to support '*a run of unsuccessful underwriting*' by others.³²

In 1980 severe losses from a combination of catastrophes, systemic issues and conduct scandals started to emerge. Several proposals were made to use the central fund to support participants experiencing severe losses. Such proposals were declined each time with a reiteration that the purpose of the central fund was the protection of policyholders, not participants.³³ While the narrow acceptable scope of collective liability remained unchanged, the framing of the central fund broadened. Increasingly the central fund was positioned as core to the collective reputation of the market, and was a prominent feature of public facing promotion of Lloyd's:

... [the central fund is] available to policyholders in the event of the failure of any underwriting member. No Lloyd's policyholder has ever suffered financial loss through the insolvency of a Lloyd's underwriter, and Lloyd's can fairly claim that their policies equal the finest security obtainable anywhere.³⁴

The same positioning is seen in an update to the Central Fund Byelaw in 1986: '*the importance of the Central Fund as a vital element underpinning the security of the Lloyd's policy... as its primary purpose.*' The security of a Lloyd's policy and the central fund are attributes of Lloyd's as a whole, which have been organized to accommodate participants' individual liability for their losses:

Any [participant] failing to contribute to the fund may be required to cease underwriting... and [the Committee] may sue defaulting [participants] where money from the Central Fund has been paid to discharge their underwriting liabilities. This is an integral part of the Central Fund arrangements and underlines the fundamental principle that [participants] underwrite 'each for his own part'.³⁵

Occasional deviations from the agreed narrow parameters of mutualisation have occurred and were framed as temporary departures from an acceptable balance of the interests of the parts and the whole. For example, in the 1990s Lloyd's survival was threatened by a series of crises and catastrophes and several initiatives for the collective pooling of liabilities were introduced. Failing participants' liabilities were pooled and reinsured into a new centrally owned reinsurance company.³⁶ A mechanism to cap participants' exposure to any future extreme losses was proposed, accepted, adjusted, implemented, and stopped within a four-year period from 1992 to 1996.³⁷ In 1996 a package of extreme measures was agreed to prevent the failure of the market. Participants paid to cap their losses by re-insuring old liabilities into a new, separate legal entity. This proposal was agreed after much contestation and required the mandatory transfer of relevant financial reserves and the existing Central Fund. A new Central Fund was established in relation to new insurance policies.³⁸ In 1999 a 5-year reinsurance contract was agreed to provide financial security behind the (new) central fund *'The deal... will mean that the Lloyd's market has access to in excess of £800mn in mutualised resources'*.³⁹ As well as benefiting Lloyd's collective reputation through the increased security of policies, this mechanism was intended to benefit participants individually by reducing their contributions to the central fund. Each of these initiatives centralized the administration of liabilities and/or losses and in some cases increased the mutualization of losses.

The departures from the principle of individual liability were accepted—after significant contestation—as the only way of ensuring Lloyd's survival. This assumption had been thoroughly tested; the implications of Lloyd's intentionally ceasing to trade had been evaluated and found to inflict greater damage on participants.⁴⁰ Participants accepted a collective approach to losses only because it was ringfenced and framed as an exception, not as a change to the principle of individual participation. During the debates leading up to the acceptance of the proposals a suggested permanent change towards a more collective model was not supported. Rather, a call to show: *'that we are a united body with a sense of community... that cares for its casualties and succours to its wounded'* was rejected by the Chairman who argued it *'went against the whole way we trade'*.⁴¹

The organization of the market with the respect to the mutualisation of losses did not require much by the way of additional work or resourcing for the Committee. However, as participants developed a sense of collective responsibility for Lloyd's reputation, the aim of the Committee became to support collective interests while maintaining the principle of individual liability.

Collective organizing accommodates interests of parts and the whole

Collective organizing in respect of partial mutuality for losses addresses the part-whole tension by 'sitting above' the interests of the parts. The principle of individual participants being liable only for losses on their own underwriting underpins the system for all normal business. The common interest of all participants in Lloyd's reputation and in the perceived financial security of a Lloyd's policy led to the decision to establish a mechanism for the collective payment of policyholders' claims in extreme circumstances.

All other decisions to take a collective approach to losses were clearly positioned as temporary deviations from the principle of individual participation. In these instances, 'partial mutualization' came into operation only after the individual funds and resources of liable participants were exhausted. The initial decision to respond collectively to extreme losses

was taken to protect Lloyd's collective reputation and consequently protect the reputations of, and business flows to, individual participants. While the organizing associated with partial mutualisation became more formal and sophisticated over time, it has never grown to such an extent that individual interests were subjugated to those of the collective. Partial, limited mutualization provides protection to individual participants in the event of extreme losses (benefit to parts), supports the collective reputation (benefit to the whole), and with only minor impingement to the autonomy of individuals.

Collective organizing element two: collective trading rights (from 1920s)⁴²

Contextual conditions leading to emergence of collective organizing

The growth of international trading was key to the emergence of collective organizing in relation to foreign regulation. Until the early twentieth century, Lloyd's participants were principally engaged in marine underwriting which, by its nature, is not tied to a geographic location. From the late nineteenth century, as non-marine insurance grew, Lloyd's participants wishing to transact this type of insurance were subject to the regulations of countries in which they sought to do business. As such regulation was designed for insurance companies, compliance was difficult for Lloyd's participants, operating as individuals. Not only was regulatory compliance challenging, but many participants disagreed with the principle of making deposits abroad,⁴³ an increasingly common regulatory requirement. During the 1920s participants' challenges in complying with foreign regulation were regularly discussed without solutions being agreed. In 1925 a participant proposed establishing a new company to act as a front for participants, making deposits, collecting premiums, and paying claims abroad. The proposal was rejected by participants and the Committee because of concerns about creating dependence on a third-party corporate body, and because it represented a departure from the principle of individual participation.⁴⁴ Without an agreed solution, interpreting and providing advice on how to comply with *'the intricacies of foreign insurance legislation'* became increasingly difficult for Committee staff.⁴⁵ In 1929 the Clerk to the Committee proposed a collective response whereby local representative offices would be opened to undertake certain regulatory tasks on behalf of participants, such as centralized payment of deposits. Yet this collective solution was considered *'too contentious to progress'*.⁴⁶

Problem triggers salience of part-whole tensions and participants accept a collective solution

In 1933 the Illinois insurance regulator required a local deposit to be lodged for Lloyd's participants to retain trading rights in the state. The decision to pay was made by two participants acting individually, without wider collective authority, and who arranged to raise the necessary funds from six participants. In 1936, the Illinois regulator demanded a significant increase in the deposit amount. The Committee, whose advice was sought, was constrained by the divided opinion of participants and absence of legal grounds to put collective funds to such a use. Consequently, the non-marine underwriting participants agreed to pay the additional deposit, raising funds *via* a bank loan.⁴⁷

This action and associated discussion led to the emergence of some commonly agreed principles: it was undesirable for individuals to make their own arrangements for deposit payments; deposits should not be funded by way of bank loans; any solution should be

arranged and controlled by the organizing actor to ensure a single voice in engagements with regulators. The Committee was *'deemed to be the only body that had the necessary prestige for dealing with foreign governments'*.⁴⁸ This broad consensus around key features of a solution to foreign regulatory compliance, enabled the Chairman to confirm at a meeting of participants in 1936, that, subject to proper safeguards and provisions, there was no longer opposition to making deposits abroad. He put forward a proposed scheme, which was *'carried without single dissent'*.⁴⁹ Yet, as the Committee could not compel participants to accept the scheme, it took two years of debate around specifics to agree a form and structure that was unanimously supported.⁵⁰ In 1938 the scheme—a finance company controlled by the Committee, funded by a levy on participants, which issued loan notes solely for the purpose of funding foreign deposits in support of trading licences—was established.⁵¹

Lloyd's participants had now agreed that it was in their individual interests that a) the principle that a common approach to compliance with foreign legislation was necessary to gain and retain access to trading rights and b) to create a centralized capability for the raising and payment of local deposits. The parts' interests were thus to be met by the contentious, but accepted, development of greater collective organizing.

Recurrent salience of part-whole tension shapes the role of the central actor and the evolving collective organizing

While the creation of the finance company addressed the issue of how individual participants could comply with requirements for local deposit payments, ongoing foreign regulatory compliance remained challenging. The Committee spent much time and attention dealing with such matters on behalf of participants. In a speech reviewing the activities of 1938, the Chairman commented that *'they had had an exceptionally difficult time defending the business of Lloyd's against new legislation... having to deal with legislative problems arising in 27 countries'*.⁵² A collective approach to dealing with foreign legislation and the establishment of a central mechanism for deposit payments became more widespread, with this approach followed in response to several other trading rights issues. Central involvement in this aspect of the market's activities increased incrementally, with each collective response judged more beneficial to participants than any associated loss in autonomy. In 1939, when a US trust fund was proposed as a way of allaying US legislators' concerns about the off-shore flow of US dollars during wartime, the scheme was *'received without demur'*.⁵³ The transfer of premiums into a common trust fund was structured to accommodate the principle of individual underwriting and liability. By 1949 the central Policy Signing Office checked policies for compliance with foreign legislation, not just Lloyd's own rules.⁵⁴ In 1971 a trust fund was established for Canadian dollar business.⁵⁵ Throughout the 1970s a significant amount of Committee time was engaged in negotiating with European regulators in relation to the UK joining the European Economic Community.⁵⁶ Each of these incremental increases in the Committee's responsibilities created additional work, often requiring more staff, to operate the centralized function.

By 1983 centralized protection and development of international trading rights was high priority and a core responsibility for the new central role of Head of External Relations. This senior role had responsibility for the *'development and overall direction of Lloyd's policy vis-à-vis the various groups with which the Society comes into contact here and abroad, notably media, legislators, government departments, regulatory and taxation authorities'*.⁵⁷ However, this was

not a responsibility executed unilaterally. Participants exerted influence through representation on a sub-committee on External Relations, which was responsible '*for policy matters affecting Lloyd's relations with legislative and tax authorities both home and overseas*'.⁵⁸ The growing set of responsibilities related to foreign trading rights led the Committee to take an increasingly proactive view of the role it should be taking on behalf of Lloyd's as a whole in respect of international trading. A policy statement issued following a Committee strategy off-site stated:

the [Committee] reviewed ... the question of access to world [insurance markets]. Its conclusion was that the [Committee has] an active role to play in assisting the market to identify possible new [product and geographic] markets and method of entry into these markets.... The [Committee] will assist in unlocking the doors to new commercial opportunities wherever possible...⁵⁹

However, there was not a wholesale shift of responsibility for international business development activity from individual participants to centralized activity on behalf of the market as a whole:

I am very conscious that the hard work on developing new schemes and initiatives to exploit all these opportunities must rest with individual brokers and underwriters. But the [Committee] will certainly be doing all that they can to support the market in these endeavours.⁶⁰

A description of the work of the international department in 1991 is also positioned as supporting, rather than leading the market:

Essentially the department's brief has remained much the same over the years, 'to secure and maintain Lloyd's underwriters' eligibility to transact insurance business worldwide'.⁶¹

The ongoing tension between a more proactive central role and the autonomy of participants was seen throughout the 1990s. In 1994 a Committee member framed centralised business development as a portfolio management goal for the benefit the whole market:

We are a very English-speaking trading Society and we need to get the balance of the different cycles that happen across the world economy so that we are not the prisoners of just one Western hemisphere cycle. I absolutely believe we need to be doing more business in the Asia-Pacific region than we are at the moment.⁶²

Yet, participants still had autonomy to pursue independent initiatives:

it is no longer sufficient to rely on selling insurance off the back of Lloyd's name. We have already set up a joint venture in France and are examining the possibility of opening a German office.⁶³

And there was criticism of the more proactive central role:

...he [new Committee staff] ensured that Lloyd's secured a licence to trade in Japan and Singapore. To Lloyd's traditionalists [he] appeared to overstep the authority of a [Committee] Executive.⁶⁴

Statements and strategic objectives made by the Committee continued to take a whole-of-Lloyd's perspective on trading rights: '*we must open up to new sources of business*'⁶⁵; '*our world-wide licences will have been expanded further*'⁶⁶; '*the Lloyd's market's ability to trade internationally will be enhanced in Asia, South America, and Eastern and Central Europe*'⁶⁷ 'Lloyd's

*must develop new trading rights in developing markets, supported by effective operational infrastructure, to reflect long-term shifts in the global economy.*⁶⁸

Yet the detail supporting these initiatives reflected the ongoing need to accommodate the interests of participants as independent parts of the whole: *'working parties led by senior market [participants] will provide the necessary objectivity and relevance,'*⁶⁹ *'where opportunities exist to extend Lloyd's licence networks cost effectively, activity will be continued or initiated,'*⁷⁰ *'the prioritisation of new trading rights and forms of access is agreed by the market [participants] and [Committee] working in partnership to consider territories on a case by case basis.'*⁷¹

Collective organizing accommodates interests of parts and the whole

Whereas the collective organizing of previous partial mutualisation example 'sits above' the interests of the parts, the collective organizing associated with trading rights accommodates the interests of the parts 'within' the collective organizing. Since the first steps towards a collective approach to trading rights, this element of Lloyd's activity has increasingly become organized at the level of Lloyd's as a whole. Over time, the series of responses developed into a set of worldwide trading rights and the central infrastructure necessary to ensure ongoing compliance with foreign regulations. The solution to a problem faced by the parts (the individual underwriting participants) developed to also become beneficial to the collective as a whole: *'by virtue of our world-wide licences... , the market can be accessed by customers from around the globe.'*⁷² By 2006 *'international market access and world-wide trading rights'* were explicitly identified as one of five benefits to participants of membership of the Lloyd's market.⁷³ Yet throughout, the collective organizing accommodates the interests of the parts; the principle of individual participation remains at the core of the series of collective responses. Participants retain the autonomy to choose whether to do business in each territory and where they do, they trade as individuals under a common licence. The principle of individual participation is incorporated through structural mechanisms such as working groups involving participants in decision making around trading rights, *'user-pays charging'*⁷⁴ for centralized trading rights activities, and an agreed target position for trading rights negotiations *'... legislation designed specifically for an 'association of underwriters' with individual... liability.'*⁷⁵

The first collective response to a trading rights-related problem experienced by individual participants was adopted as it benefitted participants directly. Trading rights related structures and processes subsequently developed by increment. When developments were considered, part-whole tensions became salient, ensuring the collective solution continued to provide value to participants through the scale efficiency benefits of securing and maintaining international trading rights (benefit to parts). Consequently, effective operation of the trading rights framework became an important responsibility of the central actor to ensure individual participants' interests were met by ongoing participation in the group (benefit to the whole).

Collective organizing elements three and four: centralized policy, claims & payment administration (from 1914); and participant business oversight (from 1923)⁷⁶

The development of two further examples of collective organizing—Centralised Policy and Claims Administration, and Participant Business Oversight—displayed similar patterns

to those seen in the two examples above. Therefore, for reasons of space constraints associated with rich historical narrative, elements three and four are summarised in [Table 1](#). The key driver for centralized administration was the cost efficiency benefits of centralized processing, whereas the driver for centralized participant business oversight was the desire to protect the market's collective reputation from harm from poor individual underwriting performance.

As with the collective organizing already discussed, the interests of the parts and whole are accommodated in different ways. Centralized Administration subrogates the autonomy of the parts to centralized control, which is accepted because of the direct efficiency benefits for individual participants, such as lower staffing requirements. Participant Business Oversight also subrogates the interests of individual participants but is less willingly accepted, as the restriction on business planning freedom generates only indirect benefits through the protection of Lloyd's collective reputation. Nonetheless, as explained in [Table 1](#), the development of these two elements of collective organizing follows a similar pattern to those explained above. Following a period of resistance to collective organizing, a collective solution is adopted in response to a trigger problem as it provides direct benefit to individual participants. The specific manifestation of part-whole tensions shapes the mode of accommodation of part-whole interests adopted. The central actor's role develops, taking on responsibility for maintaining the collective solution to ensure it meets the interests of individual members. Responses to subsequent related pressures increase collective organizing, while retaining the mode of part-whole interest accommodation initially adopted.

Development of an infrastructure of interdependence

Much of Lloyd's collective organizing is interconnected. We outline the nature of these interconnections and the relationship between collective organizing and the development of the role of the central organizing actor. The growing collective organizing intertwined with the changing role of the central actor increases the interdependence between the interests of the parts and the whole in a system we term an infrastructure of interdependence. We define the infrastructure of interdependence as comprising the interconnected set of elements of collective organizing, the central organizing actor, and the interdependent, yet often contradictory interests of the parts and the whole.

Interconnections between collective organizing

Collective organizing is interconnected through beneficial relationships between elements, and cumulative development in which one collective solution builds on another. For example, the central fund creates a layer of financial security at the level of the whole, a benefit of which is the existence of a quasi 'entity' to which credit agencies can grant a financial strength rating. This layer of collective financial security also provides comfort to foreign regulators when granting trading rights.⁷⁷ A cumulative interconnection is seen in the decision to move to shared dedicated trading premises which provided the foundation for the subsequent decision to introduce membership charges and common operating rules. The existence of a centralized policy production service provided the foundation for centralized checking and oversight of internal standards and trading regulations. Furthermore, as more shared or centralized solutions are adopted, participants' familiarity and the Committee's

Table 1. Summary of the development of two further elements of collective organizing.

	Centralised policy production (from 1914)	Oversight of participants insurance activities (from 1923)
A) Context leading to emergence: participants initially acting as individuals in this aspect of their operations	<p>For over two hundred years, once a policy was agreed, it was checked and signed by being passed around the Room from desk to desk. This could take several days or longer and often left documents damaged.</p> <p>In 1914, a proposal to improve policy production through a centralized process was hindered by lack of space, but 157 participants signed a petition refusing to allow the Captains' Room (restaurant) to be converted to create suitable space. Committee chairman saw this a <i>"hindering the progress of [Lloyd's] because some of us are too lazy to go out to lunch"</i>^a</p>	<p>Most trading decisions (e.g. choice of business type & volume; pricing, policy conditions) were matters for individual participants. The financial security practices introduced in C19/early C20 (deposits, audit, central fund) concerned only capitalization, not the transaction of insurance business.</p> <p>The Committee supported trading autonomy, for example, taking remedial action when Theft and Burglary Policies had been unintentionally restricted by the wording of the Lloyd's Act 1871.^b In 1911 the Lloyd's Act was amended to cover all types of insurance risk.^c</p>
B) Trigger event: specific problem triggers salience of part-whole tensions, forcing participants to act collectively, or accept collective solution	<p>In 1916 the Committee discussed clerical challenges arising from the call up of men to war service. A sub-committee established a separate office, staffed by 'girls' to process and sign policies on behalf of participants.</p> <p>Resistance from some participants who were unwilling to delegate this activity meant that the scheme was voluntary and not run under the control of the Committee.^d</p>	<p>In the early 1920s, poor economic conditions and a significant loss led to the introduction of two constraints on participants' insurance trading: annual premium limits^e and the <i>de facto</i> banning of credit insurance.</p> <p>The Committee framed the credit insurance ban not as a constraint on trading autonomy but a measure to prevent future losses and reputation damage. However, many participants were reluctant to sacrifice their underwriting freedom and a prominent participant contested the action as <i>ultra vires</i>. The tension was resolved by agreeing this type of insurance could be transacted subject to certain safeguards.^f The central constraints were accepted as necessary to repairing Lloyd's reputation.</p>
C) Recurrent salience of part-whole tensions shapes evolving collective organizing...: once 'threshold' crossed, more collective solutions accepted; salience of part-whole tensions constrains collectiveness	<p>Participants rejected plans that the service be overseen voluntarily by participants, given the competitive sensitivity of certain policy information. Consequently, staff were hired centrally.^g</p> <p>The service produced policies in a single day and freed up time for participants. As the scheme grew more popular it split to process marine and non-marine policies in separate offices.</p> <ul style="list-style-type: none"> the "Signing Bureau" was taken over by the Committee in response to fraudulent losses and made compulsory. All Lloyd's policies were required to be stamped with the Lloyd's Seal (1924) re-named Lloyd's Policy Signing Office (LPSO)^h (1928) services increased to include statistical and accounting record keeping, foreign exchange administration, foreign legislation checking, Lloyd's regulation checking)^j (1930s–40s) commenced central accounting to support market level financial reporting, and tax and regulatory reporting^j (by 1960s) scope broadened to provide services to non-Lloyd's insurance industry participants^k (2000) <p>LPSO services have been reviewed on behalf of participants at least once to ensure their need were met and quality standards were acceptable^l (1990).</p>	<p>The extent of central involvement in individual underwriting underwent little change over the next fifty years as the principle of participant's autonomy in respect of their insurance business remained sacrosanct: <i>"an underwriter is completely free to underwrite what business he wants to, subject to certain exceptions found in practice to bring discredit to Lloyd's, and at what premium he thinks proper"</i>^m (1950);</p> <p><i>"...it is no part of the Committee's function to intervene in matters of day-to-day underwriting judgement and it is not in members' interests that the Committee should do so"</i>^m (1980)</p> <p>Scandals and catastrophic losses of the 1980s/90s led to pressures from investors and regulators for greater central oversight. The Committee's growing responsibility for the whole led to increasing oversight of participants with the aim of raising the standards of, and protecting, the whole:</p> <ul style="list-style-type: none"> reducing premium limits (1987) submission of annual business plans (1994) minimum standards framework and business plan approval (2003) performance-based differential oversight (2019)^o

(Continued)

Table 1. Continued.

	Centralised policy production (from 1914)	Oversight of participants insurance activities (from 1923)
Cii) ...and shapes role of central actor: growth of collective solutions increases central actor responsibilities and role in protecting the interests of the whole	<p>Growth in work and staff required additional space. Another unsuccessful attempt was made to re-purpose the Captains' Room in 1920. Participants approved an alternative proposal to acquire a new building in 1923.</p> <p>The Committee gained responsibility for the maintenance and improvement of the centralized service, for example 'mechanisation' of the signing and accounting system started in 1943.^p</p> <p>Modernising policy production processes to meet commercial and regulatory demands became a priority for the Committee,^q which viewed centralized processing as "<i>essential to the operation of [Lloyd's], [offering] economies of scale and greater simplicity in the way the market processes business.</i>"^r</p>	<p>Centralized oversight activities created the need to hire specialist resource with relevant skills and expertise.</p> <p>As oversight of participants' business activities grew, the Committee's role became increasingly orientated to the performance and reputation of the market as a whole.</p>
D) Accommodation of interests of parts and whole	<p>Centralized policy processing directly benefits participants. The loss of autonomy in relation to this administrative activity is relatively minor and is more than offset by the efficiency benefits. There are also indirect benefits to the whole: e.g. reputational (consistent quality of policy production), support for regulatory reporting through information aggregation.</p>	<p>Centralized business oversight solutions exist to satisfy interests of the whole. While they may bring indirect benefits to the parts (e.g. through protection of the market's reputation), they are typically 'grudgingly' accepted by participants as a necessary condition of operating in the market.^s</p>

^aGibb DEW (1957) Lloyd's of London: a study in individualism, Macmillan p. 249, 253. ^bGibb DEW (1957) Lloyd's of London: a study in individualism, Macmillan p. 169. ^cWright & Fayle (1928) Lloyd's of London, Macmillan, p. 434. ^d"25 Years of Policy Signing", authored by founder of scheme, Lloyd's Office Gazette, April 1941. ^eReport of Cromer Working Party (1969) p. 27. ^fGibb DEW (1957) Lloyd's of London: a study in individualism, Macmillan p. 285, 289. ^gGibb DEW (1957) Lloyd's of London: a study in individualism, Macmillan p. 252. ^hWright & Fayle (1928) Lloyd's of London, Macmillan, p. 439. ⁱLloyd's Office Gazette, September 1949; Gibb DEW (1957) Lloyd's of London: a study in individualism, Macmillan p. 262. ^jReport of the Cromer Working Party, 1969 p. 65. ^kArticle on London Insurance market-wide processing and settlement initiative, One Lime Street November 2000. ^lReview of funding model, Lloyd's Newsletter, December 1990. ^mLloyd's Office Gazette, January 1950. ⁿChairman's speech at General Meeting 7 November 1980, cited Hodgson, G (1984) Lloyd's of London: a reputation at risk, Penguin p. 286. ^oDuguid, A (2014) p. 44; Lloyd's Committee Regulatory Plan 1994; Chairman's Strategy Group report 2002, Insurance Insider January 16, 2020. ^pLloyd's Office Gazette, September 1949. ^qFor example, Planning for Profit: a business plan for Lloyd's of London, April 1993 p. 34. ^rLloyd's Strategy 2010–2012 p. 21. ^sFor example, consultation on premium limits, Report of the Cromer Working Party, 1969 p. 30.

ability to manage collective organizing increases, becoming the customary response to questions of organizing in many aspects of the market's operations; *'Where services are best organized on a communal basis, Lloyd's provides them.'*⁷⁸

Such interconnections make the collective organizing a set of interconnected elements, rather than a list of separate characteristics. A collective organizing element that was counter to individual interests might be acceptable because of its interconnection with other valued elements. For example, the introduction of corporate capital participation in 1994 foregrounded tensions between the interests of the parts (participants responsible for only their own losses) and the whole (collective responsibility for the reputation of the market). Some existing participants raised concerns that the new corporate participants would be less committed to Lloyd's as a whole, driven only by their own interests, and consequently would not support the partial mutuality provided by the central fund. However, the counter to this concern acknowledged that the features that attracted corporate firms to Lloyd's were dependent on the existence of the central fund: *'Corporate*

members have declared their support for the mutual Society, without which they recognise the Lloyd's trading licences would be prejudiced.⁷⁹ Thus the interconnections between elements deepen the interdependence between participants and Lloyd's collective organizational infrastructure.

Interrelationship between development of collective organizing and of the central actor

As the Committee took on responsibility for operating each element of collective organizing, it became increasingly responsible for protecting and promoting the interests of Lloyd's as a whole, as well as the practical role of administering the collective solutions. Such change gradually altered the relationship between participants and the central actor, as summarized below and outlined in detail in On-line [Appendix B](#).

In the late eighteenth century, the Committee was an administrative convenience to allow participants to manage their affairs effectively. Collective responsibilities, such as the admission of new members *via* payment of a subscription, were taken on tentatively and only with the support of participants. Catalyzed by the opportunity to review arrangements following a fire in 1838 that destroyed Lloyd's trading premises, the Committee 'sought to maintain the pre-eminence of Lloyd's'. However, the Committee of this era remained guided by participants' interests, with regular use of General Meetings, Special Committees and informal consultation. In 1871, when the first Lloyd's Act codified the role of the Committee and decision-making mechanisms and parameters were defined, collective solutions were chosen when they directly benefitted participants. In the twentieth century, as Lloyd's size and complexity grew, the central actor became increasingly responsible for the protection and development of collective organizing for the benefit of the whole. By the 1980s, the Committee had clear powers to take decisions in the interests of Lloyd's as a whole. Since the 1990s, the central actor describes its role as one of leadership, in which participants are framed as stakeholders.

Over two hundred and fifty years the central actor has changed from instantiating to representing to leading participants. As a result, the central actor developed from being the operator, to the architect, of the infrastructure of interdependence.

Retention of some individual organizing alongside collective organizing

Despite a trajectory towards collectivity, not every aspect of Lloyd's moved towards collective organizing. The interests of the parts not only shaped the development of collective organizing but also sustained certain individualized aspects of the market. Participants join, and remain at, Lloyd's because of autonomy in matters relating to competition, and the nature and duration of their participation. Individual participation also benefits Lloyd's as a whole, providing value to clients through the resultant diversity of underwriting and risk appetites, and price-based competition. There is no evidence of an inevitable shift to all aspects of the interorganizational group becoming organized collectively. Actors demonstrate agency by exercising choice over the balance of the interests of parts and whole in different situations. This is seen most strongly in relation to the mechanisms of participation in the market. For example, an 1824 Byelaw formalized the long-standing principle of individual, not joint, liability:

No [participant] shall underwrite Policies of Insurance within the Rooms of this House in Partnership Firms, or otherwise than his own name, or that of one individual for each representative sum subscribed.

The re-affirmation of participation as individuals is clearly evidenced in the rationale for the retention of existing capital structures following a major internal review in 1991:

...the advantages arising from [participation] as sole traders... [participants] have several, rather than joint liability and are not responsible for the debts of others on the syndicate.⁸⁰

The radical option of Lloyd’s becoming a single corporate entity was evaluated and dismissed as one of the potential solutions to the challenges facing the market in the 1980–1990s. The co-existence of both interdependence and ongoing tensions between the group and its members was evidenced; the loss of the benefits of individual participation for Lloyd’s as a whole (entrepreneurship and competition) were cited as the principal reasons for rejection of this option, despite ‘superficial attractions’.⁸¹

Discussion and contributions

Our paper set out to explain how the cumulative management of interdependent part-whole tensions shapes the pattern of organizing within a longstanding interorganizational group. We use our findings to develop a conceptual process model of the management of the part-whole paradox (Figure 3) and how such management shapes the dynamic and evolving persistence of the paradox (Figure 4). The paradox becomes salient when an event occurs that affects the interests of the parts and the whole. Any response is informed by the temporal context (Pierides, Clegg, and Cunha 2021), as past solutions inform the selection of the solution in the present, both normatively and practically. A proposal for collective organizing may be rejected by participants initially, but the subsequent occurrence of some

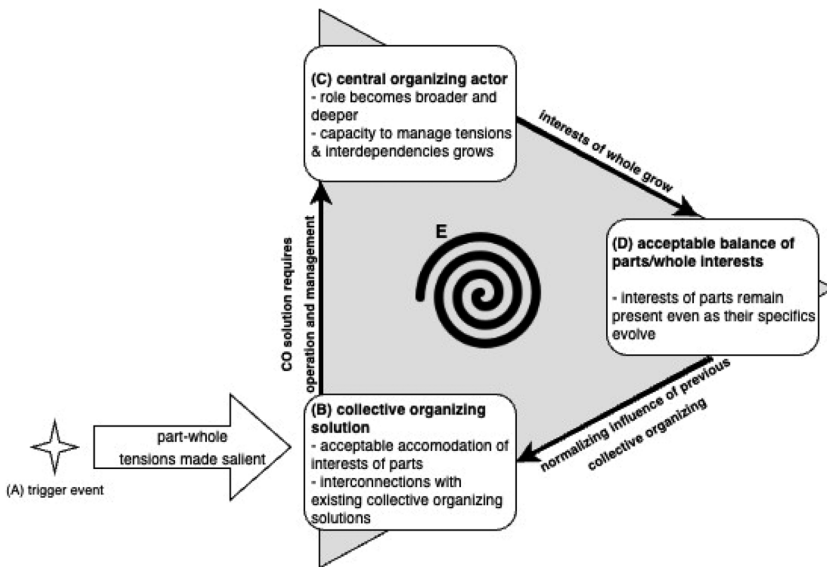


Figure 3. Processual dynamics of collective organizing in response to part-whole tensions.

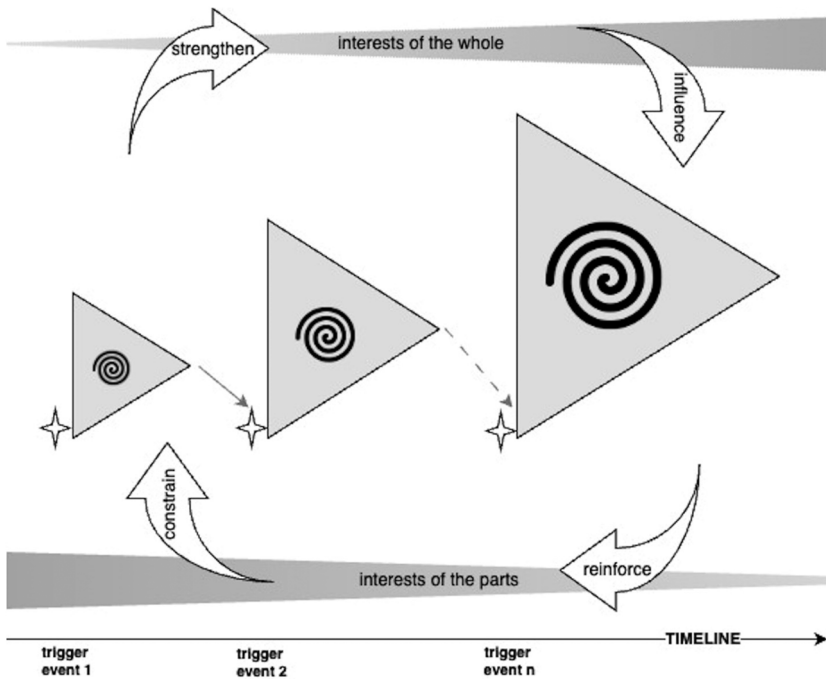


Figure 4. Dynamic persistence of the part-whole paradox.

trigger event generates circumstances in which the benefits of a collective solution offset its impact on participants' autonomy. The repeated selection of collective organizing responses, with varying but acceptable accommodation of the interests of the parts (such as liability for other participants losses only under exceptional circumstances), incrementally builds legitimation in their use. For example, once a centralized service for policy signing administration was established, centralized administration of other operational processes became both normatively acceptable to participants and practical, given the scale economies of increasing use of collectively-funded administrative staff and premises.

Figure 3 depicts the five important components of paradox management in interorganizational systems: the collective solutions (individually and as a set) with acceptable benefits to individual participants (B); the role and management capacity of the central organizing actor (C); and the acceptable balance of the interests of the parts and the whole (D). These three components are connected cyclically, with each cycle triggered by an event (A) which creates a problem that makes the part-whole tension salient. The model shows how the shifting acceptable balance of part-whole tensions (D), and the adoption of collective organizing solutions forms deepens the interdependence between the parts and the whole, as depicted by the spiral (E). We now explain our process model, discussing the key processual dynamics in the management and persistence of paradoxes of organizing.

Antecedent to collective organizing

Tensions between the parts and the whole are typically latent, but become salient, recurrently, when participants are faced with events framed as collective problems. For example,

the increasingly protectionist foreign regulatory environment seen in our case, included a specific event (A) that triggered the part-whole paradox becoming salient. This flow of events within which the part-whole paradox shifts from latent to salient also goes some way to explaining the absence of fragmentation, as instances of collective organizing only emerge when feasible solutions support the interests of the parts.

Development of collective organizing

In response to the trigger event, a collective organizing solution is generated (B) that is deemed to have an acceptable level of benefit to individual participants. The form of the collective organizing solution is influenced by existing collective organizing solutions (e.g. aligning temporal norms of new processes with existing processes; using existing centralized resources to provide additional services). As responses build on previous responses (Lanzara, 1998), interconnections bind the collective organizing elements as a set. Within this set, each element of collective organizing can accommodate tensions differently (Gaim et al., 2018): the interests of the parts may be at the core, with collective organizing wrapped around (e.g. trading rights); the interests of the parts may dominate up to a certain level, above which collective organization occurs (partial mutuality); and in other the interests of the parts are more or less willingly subrogated to those of the whole (e.g. policy administration; business plan oversight). As new collective solutions (B) are added to collective organizing elements, each cycle of paradox management increases the aggregate amount of collective organizing.

Development of role and responsibilities of central organizing actor

Each collective solution must be operated and managed by the central organizing actor on behalf of the whole (C). Consequently, increasing collective organizing increases the role of the central actor, broadening and deepening its involvement in the activities of participants and in the operation of the collective whole. With each new collective organizing solution and each increase in collective level responsibilities, the weight of the interests of the whole grows. However, because each collective solution comprises acceptable benefits to the parts (B), their interests remain present. The central organizing actor must therefore execute its growing role in the face of a responsibility to balance the growing interests of the whole alongside the maintenance of acceptable accommodation of interests of the parts. As a result, the central actor develops a capacity to manage both the tensions and interdependencies comprising the paradox of organizing. Through the dual responsibilities of managing the collective organizing elements and managing the competing tensions of parts and whole; the actions of the central organizing actor both manage and maintain the part-whole paradox of organizing.

Changes in the acceptable balance of part-whole interests

As the interests of the whole and the central organizing actor's role in protecting the interests of the whole grow, the acceptable balance of part-whole interests changes (D). While the system can accommodate individual collective organizing solutions (B) with differing balances of interests, over time, the accumulation of collective organizing and consequent

requirement for the central actor to become custodian of the interests of the whole (C) results in the long-run balance becoming more orientated to the interests of the whole. Thus, the tensions between parts and whole are present in each cycle, but their weight and manifestation changes.

Infrastructure of interdependence

Each collective organizing solution reduces the autonomy of participants in some way. For collective solutions to be acceptable (or tolerated) responses to salient part-whole tensions, the solutions must also support participants' interests either directly, or indirectly through the benefits of an interconnected element of collective organizing. As a result, the development of collective organizing protects the interests of both poles of the organizing paradox, while at the same time increasing their interdependence (E). Consequently, the actions taken to manage part-whole tensions support the persistence of the paradox. The overall system of collective organizing and the central actor's role and growing capability to manage both tensions and interdependence, thus shifts the acceptable balance of part-whole interests and deepens the interdependence between the parts and the whole. We term this system, represented in Figures 3 and 4 by the grey triangle with a spiral inside, the infrastructure of interdependence. Figure 4 explains the long-duration dynamics resulting from repeated, cumulative cycles of management of part-whole tensions.

In each cycle, the acceptance of a collective organizing solution strengthens the interests of the whole which results in the infrastructure of interdependence growing and moving closer to the pole of the whole. However, the part-whole paradox persists as the specific interests of the parts are accommodated within each collective solution, allowing the parts interests to continue to evolve and not be neglected.

Paradox persistence and the infrastructure of interdependence

Initially, participants operate independently, and any collective organizing directly supports their individual interests. However, cumulatively, responses for managing recurrent tensions develop into a pattern of collective organizing (Cunha & Clegg, 2018). As collective organizing spreads more broadly and deeply into participants' activities, trigger events make part-whole tensions salient in different problems. In each cycle, the response to salient tensions is shaped by the constraining influence of the interests of the parts and the growing strength of the interests of the whole. Each collective organizing solution selected as a response to a problem in which part-whole tensions are salient further strengthens the interests of the whole while reinforcing the interests of the parts through their accommodation in some form. Thus, the relative balance of the interests of the parts and the whole gradually shifts in a trajectory towards the interests of the whole as a means of accommodating the interests of the parts over time. This trajectory means that interdependence grows as the benefits of collective organizing cumulatively increase, deepening participants reasons for membership of the interorganizational group. The dynamic processes through which collective organizing develops and is managed create an infrastructure of interdependence which increases with each cycle of responses (as seen in the growth of the triangle containing the spiral in Figure 4). History and the passage of time are important to this process in three ways. Firstly, each cycle of collective organizing draws on the specific nature and form of previous collective

organizing solutions. Secondly, each response will be influenced by contemporaneous economic and social practices. Thirdly, previous responses to problems in which collective organizing was selected as the solution (indicated by the grey arrow linking triangles) have a normalizing influence.

Contributions

Our key contribution is a conceptual framework, comprising a two-part model of the collective organizing of the part-whole paradox and its persistence over the long duration of history. This framework allows us to extend existing theory in three main ways that answer calls for a more historically sensitive understanding of paradox theory: explaining the persistence of paradox as dynamic and evolving; explaining the adaptive nature of the infrastructure of interdependence; and identifying the cumulative and patterned nature of responses to long duration part-whole paradoxical tensions.

Historic perspective explains paradox persistence as dynamic and evolving

We contribute by extending understanding of the role of temporality in explaining persistence of paradox (Cunha & Clegg, 2018) across periods of latency and salience. We identify the interrelationship between the evolution of organizing in interorganizational groups and the persistence of the part-whole paradox inherent to such settings. Rather than treating persistence as a background concept, which risks assumptions of stasis or stability (Cunha & Putnam, 2019), our model shows how the core elements of paradox—contradiction and interdependence—are always present but also changing. Hence persistence of the paradoxical tensions does not imply stasis (Gaim & et al., 2022), but rather that, in the particular part-whole paradox we study, persistence is achieved through change in the interorganizational system; that is, as the part-whole paradox evolves, so does the system through which it persists (Putnam et al., 2016).

As shown in Figure 3, each time part-whole tensions are made salient the response is a solution in the form of collective organizing which accommodates and reinforces the interests of the parts while strengthening the interests of the whole. Such solutions allow paradoxical tensions to become latent until an event triggers the next period of salience (Jarzabkowski et al., 2018). Figure 4 shows how each subsequent period of salience results in more collective organizing, thereby deepening the relationship between the interests of the parts and the whole and building an infrastructure of interdependence. A historic approach to persistence enables us to extend knowledge of how paradox shifts between periods of latency and salience. While latency is a key characteristic of a paradox (Smith & Lewis, 2011) it is difficult to observe (Jarzabkowski et al., 2018) by virtue of its hidden or dormant nature. Existing, short duration studies have, therefore, tended to focus on the responses involved in addressing paradox tensions that have become salient. Understanding events as embedded in a temporal context and in particular socio-historic times and places (Rowlinson et al., 2014) allows us to trace how events trigger periods of salience (Figure 3, A) that demand a response following which the tensions subside into latency but do not disappear. A historic perspective also allows us to identify how traces of these responses to moments of salience persist across periods of latency, in our case, through the growth of the central organizing actor (Figure 3, C) and deepening interdependence (Figure 3, E). The

central organizing actor became a dynamic component of the infrastructure of interdependence, with roles and responsibilities that evolved in response to the ongoing management of recurrently salient part-whole tensions. Thus, persistence and its relationship to latency (Jarzabkowski et al., 2018) can be better understood through the lens of history in terms of the way responses to temporally situated events remain as traces throughout periods of latency, being progressively strengthened in subsequent periods of salience.

Adaptive nature of infrastructure of interdependence

Our findings on the infrastructure of interdependence contributes to knowledge on the nature of interdependence in paradoxical systems (Schad et al., 2016; Smith & Lewis, 2011). Specifically, we show that deepening interdependence is critical to the capacity of an inter-organizational system to adapt and change in a way that harnesses the positive potential of the paradox of organizing. Each collective organizing response accommodates and maintains the tensions between the parts and the whole, while deepening and normalizing the interdependence between the parts and the whole. This results in the development of management capacity at two levels. As the collective organizing builds, so too does the need for the central organizing actor to manage the practices, structures, and services that comprise the collective organizing. Such management increases the breadth and depth of the central actor's involvement in participants' activities. This in turn builds the central actor's capacity to respond effectively and reflexively (c.f. Schreyögg & Kliesch-Eberl, 2007) to salient paradoxical tensions in the moment, while accepting and managing the paradox in the long term (Smith & Lewis, 2011). Interorganizational arrangements typically have a requirement for collective and/or transparent decision making (Altman et al., 2022). Consequently, the development of capacity to maintain the durability of the arrangement through the reflexive management of an infrastructure of interdependence is a critical and positive feature of maintaining long duration interorganizational arrangements. Prior paradox studies have noted interdependence as a key component of contradiction because opposing poles cannot simply separate (Clegg, da Cunha, and Cunha 2002; Jarzabkowski et al., 2018; Jarzabkowski et al., 2021; Schad et al., 2016; Smith & Lewis, 2011). Our long-term study shows that this interdependence may also be a positive element of managing paradoxical contradictions, both enabling them to remain latent over longer periods of time, and also deepening and extending a system's capacities to manage interdependence during moments of salience (Jarzabkowski et al., 2018; Schad & Bansal, 2018).

Managing paradoxes of organizing as a cumulative pattern of responses

Our framework also allows us to elaborate upon existing understanding of responses to paradox (Raisch et al., 2018; Smith, 2014) which prior studies have largely investigated as discrete sets of responses to a specific situation (e.g. Jarzabkowski et al., 2013), or oscillating responses between the poles of a paradox (e.g. Smith & Besharov, 2019). By contrast, our two-part process model provides a theoretical explanation of a) the patterned nature of responses to paradoxical tensions as they accumulate over time; and b) the connection between cumulative responses, which represent a changing trajectory in the relationship between poles, rather than oscillation between them. First, responses over the long duration are not singular responses to a particular situation (Pierides & et al., 2021). Rather, they build upon each other, consolidating an acceptable way of responding to the paradox. In our case,

each element of collective organizing became cumulatively stronger, building upon collective solutions with acceptable benefits to the parts. Paying attention to the temporal flow of influence between events tells us that while each element of collective organizing was established on its own merits, with no explicit intent to increase either the interests or collective assets of the whole, there was a gradual, cumulative development of an infrastructure comprising collective organizing alongside an increasingly influential central organizing actor. Thereby each time a collective response is selected as a solution to a problem of part-whole tensions, it adds to the normative weight of a collective response. That is, this becomes the customary way to respond to tensions in the paradox of organizing, laying down a long duration pattern of response (Clegg et al., 2002). Such cumulative responses become intertwined and shape each other over the long duration of history. In our case, this meant that the cumulative responses that built the elements of collective organizing are intertwined with the cumulative responses that developed the collective orchestration capabilities of the central organizing actor (Giudici et al., 2018). The two series of responses are interconnected, together cumulatively building an increasing infrastructure of interdependence. We thus expand existing notions of patterned responses to paradox which have considered responses in relative isolation (Jarzabkowski et al., 2013), by identifying how cumulative responses over time progressively settle into a normative pattern for dynamically managing and maintaining the paradox.

Second, this long duration view takes us beyond knowledge of responses as oscillations between poles (e.g. Smith & Besharov, 2019), to understand their patterned trajectory over time. Many studies have examined moments in which the interests of one side of a paradox flare up and how that is rebalanced through oscillation (Smith & Besharov, 2019), active responses (Jarzabkowski et al., 2013), paradoxical leadership (Smith, 2014), and ambidexterity (Andriopoulos & Lewis, 2009), among other responses. However, while any one of our cycles depicted in Figure 3 represented a flare up in either part or whole interests at that moment, cumulatively these responses do not show swings between poles. Rather, as shown in Figure 4, these responses settle into a trajectory of relationships between part and whole interests, in which the interests of the parts are better addressed by consolidating the growing interests of the whole. The part-whole paradox persists as a constitutive element of the interorganizational system (Putnam et al., 2016) but its manifestation and the relationships between the interests of each pole change over time.

Conclusion: boundary conditions and future research

By studying paradox through the lens of history we gain a perspective on the historic underpinnings of paradox as a long duration phenomenon. Paradox scholars have called for the introduction of historical approaches (Andriopoulos & Gotsi, 2017; Putnam et al., 2016) because of the potential for enhanced understandings of the role of context and of the temporal ordering of actions. By presenting one of the first examples of long duration studies using such an approach we help demonstrate the value arising from the bringing together of historical narrative and conceptual frames (Clegg et al., 2021). A historical perspective allows us to identify the mutually reinforcing processes through which paradoxical tensions are both managed and also maintained. That is, we can explain that the management of the part-whole paradox both *takes place through* the development of an infrastructure of

interdependence and is *required because of* the development of the infrastructure of interdependence.

We argue that it is the ability of the interorganizational system to accommodate variation in how part-whole tensions are managed that enables the dynamic persistence and evolution of the part-whole paradox and of the interorganizational group itself. The management of tensions is neither static, nor a repeated return to a point of equilibrium (Smith & Lewis, 2011). When considered over the long duration, organizational paradoxes may appear less as oscillations and swings between poles (e.g. Smith & Besharov, 2019), or shifts towards disequilibrium (e.g. Jarzabkowski et al., 2021), and more as a gradual trajectory towards mutually constitutive interests (Putnam et al., 2016). We therefore theorise part-whole paradox persistence as a dynamic and evolving concept, which enables the survival of the system within which it resides. Our theorizing provides grounds for future historically-informed research to examine how tensions evolve in relation to each other to maintain the paradox and prevent the dissolution of interorganizational groups. In particular, future research might investigate the differential impact of events in system-wide change and development.⁸² While our study demonstrates the cumulative consequences of a long-duration series of responses to tensions, our data do not allow us to address whether different events, or different elements of collective organizing, have a greater influence in the deepening interdependence between the parts and the whole. Such a line of enquiry may be of particular interest in interorganizational settings, given the potential for participants to value elements of collective organizing differently, in relation to their individual goals and strategies. Future research could set out to examine and compare the effects of different events, and the different value participants place upon them, in generating a deepening infrastructure of interdependence—or indeed, its dissolution.

A historical perspective also allows us to identify dynamic aspects of a system which might otherwise be viewed as static background factors. For example, in our study, the role of the central actor is key to the unfolding management and dynamic persistence of paradox and so provides a fruitful area for future study of paradox and organizing in interorganizational arrangements. In particular, we suggest a historic perspective offers potential for scholars of organizations of organizations, so-called 'meta-organizations' (Ahrne & Brunsson, 2005). The members of a metaorganization are autonomous organizations with some shared or collective goals, typically structured around a central organization which provides centralized support in the achievement of these goals (Ahrne & Brunsson, 2005; Berkowitz & Dumez, 2016). The part-whole paradox is therefore inextricably linked to organizing in such contexts. In our study, the 'locus of control' (Altman et al., 2022) of the group of interdependent organizations grew steadily in response to incremental collective organizing. While recent studies on meta-organizations have unpacked how such interorganizational arrangements emerge (e.g. Valente & Oliver, 2018), less is known about the processes of collective organization in interorganizational arrangements with different development paths, for example, established meta-organizations forced to adjust over a compressed period of time (e.g. in response to an external crisis), or those which have maintain intentionally distributed organizational decision-making powers (e.g. certain open-source software collectives, industry associations). Our framework might thus be explored for its application in these other interorganizational contexts.

We study the unfolding management of paradox and observe the antecedents and consequences of organizing decisions taken in response to contradictory tensions over a long

duration. However, our observations are constrained by the volume and voice of our source material (Kipping et al., 2014). We only observe what was recorded. We therefore have limited understanding of how and why a problem becomes framed as a problem of the whole. Future studies may focus on events unfolding in real time, or more recent data-rich historical designs, to understand this process in more detail. Techniques such as Event Structure Analysis (e.g. Aspara et al., 2023) or Machine Learning based tools like topic modelling (e.g. Fligstein et al., 2014) might aid such analysis.

Notes

1. Attributed to Walter Farrant, Caller of Lloyd's Underwriting Room, responding to a visitor asking "what is Lloyd's?" in 1890s.
2. Martin, F (1876) *The History of Lloyd's and of Marine Insurance in Great Britain*, p. 145.
3. Lloyd's 2021 Full Year Results, lloyds.com; Best's Review September 2021, Top 50 World's Largest Reinsurance Groups—2021 Edition.
4. Wright & Fayle (1927) *A History of Lloyd's* MacMillan & Co p. 96.
5. Gibb (1957) *Lloyd's of London: A Study in Individualism* MacMillan & Co p. 61.
6. *Ibid* p. 77.
7. Lloyd's Act 1871.
8. Lloyd's Strategy 2016–2018.
9. Articles of Incorporation, Additional Securities Limited, 08 March 1937, company-information.service.gov.uk.
10. For example: Histories of Lloyd's written by Martin (1876), Straus (1939), Gibb (1957) contain direct extracts from contemporaneous minutes, reports, records, and accounts of events. Wright & Fayle (1928) also had full access to Lloyd's archives and includes copies and reproductions of extracts of selected documents.
11. Date represents point from which collective organizing was first considered.
12. Evidence given to House of Commons enquiry on 'means of effecting marine insurance', February 1810, cited Wright & Fayle (1928) *A History of Lloyd's* p. 251.
13. Wright & Fayle (1928) *A History of Lloyd's* p. 365.
14. Martin, F (1876) *The History of Lloyd's and of Marine Insurance in Great Britain* Macmillan and Co p. 323.
15. Wright & Fayle (1928) *A History of Lloyd's* p. 366.
16. Gibb DEW (1957) *Lloyd's of London: a study in individualism* Macmillan & Co p. 182, 186.
17. Gibb DEW (1957) *Lloyd's of London: a study in individualism* Macmillan & Co p. 190.
18. Wright & Fayle (1928) *Lloyd's of London* Macmillan p. 420.
19. Gibb DEW (1957) *Lloyd's of London: a study in individualism* Macmillan & Co p. 192.
20. *Ibid* p. 196.
21. *Ibid* p. 271.
22. Hodgson, G (1986) *Lloyd's of London: a reputation at risk* 2nd Ed. Penguin p. 73.
23. Gibb (1957) *Lloyd's of London: a study in individualism* p. 273.
24. Wright & Fayle (1928) *Lloyd's of London* Macmillan p. 426; reflections on "Lloyd's Today".
25. The Times, 17 July 1908, Financial and Commercial Supplement, 'Troubles in the Marine Insurance Market'.
26. Lloyd's Central Fund Byelaw 1986.
27. Beeman MM (1939) 4th Ed 1947 *Lloyd's London: An Outline* Windmill Press p. 110.
28. Wright & Fayle (1928) *Lloyd's of London* Macmillan p. 427.
29. Golding CE & King-Page D (1952) *Lloyd's* McGraw-Hill p. 36.
30. *Ibid* p. 110.
31. From our shipping correspondent, "Lloyd's Loan to Roylance Syndicate", The Times, 18 Dec. 1958, p.15.
32. Report of the Cromer Working Party (1969) p. 17.

33. Lloyd's Office Gazette July 1980, Chairman's Speech at Annual General Meeting.
34. Findlay, Ian; Lloyd's Chairman "Professional standards that lead the world" *The Times*, 8 Feb. 1971, p.V.
35. Lloyd's Newsletter July 1986, article on the introduction of new Central Fund Byelaw; Lloyd's Central Fund Byelaw (1986) Sections 7 & 9
36. Duguid A (2014) *On the Brink* p. 52.
37. One Lime Street July 1995, November 1995—viewpoint opinion column.
38. Lloyd's: Reconstruction and Renewal May 1995 p. 12.
39. One Lime Street April 1999, article on the Central Fund reinsurance.
40. Lloyd's: Reconstruction and Renewal May 1995 p. 6.
41. Duguid A (2014) *On the Brink* p. 64, discussion of 1990 Annual General Meeting.
42. Date represents point from which collective organizing was first considered.
43. Gibb DEW (1957) *Lloyd's of London: a study in individualism* Macmillan p. 313.
44. *Ibid* p. 300.
45. Lloyd's Office Gazette December 1940—article on the appointment of new Principal Clerk to the Committee.
46. Gibb DEW (1957) *Lloyd's of London: a study in individualism* Macmillan p. 307.
47. *Ibid* p. 313.
48. *Ibid* p. 306.
49. *Ibid* p. 314.
50. *Ibid* p. 318.
51. Gibb (1957) *Lloyd's of London: a study in individualism* p. 299; *Articles of Association—Additional Securities Limited 1937*, Companies House.
52. Lloyd's Office Gazette January 1936—Chairman speech at annual Lloyd's Sports Club dinner.
53. Gibb (1957) *Lloyd's of London: a study in individualism* p. 237.
54. Lloyd's Office Gazette September 1949—article on activities of LPSO.
55. Lloyd's Office Gazette May 1980—Speech by previous Lloyd's Chairman to Ontario Insurance Institute.
56. E.g. Lloyd's Office Gazette June 1972, Lloyd's Office Gazette August 1973.
57. Lloyd's Office Gazette June 1983—Council and Committee Update.
58. Lloyd's Office Gazette February 1984—Council and Committee Update.
59. Lloyd's Newsletter December 1987—article on Council Strategy offsite meeting.
60. Lloyd's Newsletter July 1990—article by the Chairman 'looking to the future'.
61. Lloyd's Office Gazette April 1991—article outlining the work of the international department.
62. One Lime Street September 1994—CEO Update.
63. One Lime Street September 1994—interview with a syndicate lead underwriter.
64. Duguid, A (2014) - *On the Brink* p. 142.
65. One Lime Street January 1998—Chairman article on Future of Lloyd's.
66. One Lime Street June 1998—Chairman Speech at AGM.
67. One Lime Street February 2000—Lloyd's Three-Year Plan.
68. Lloyd's *Vision 2025* May 2012.
69. One Lime Street January 1994—article on Corporation Planning Department.
70. Lloyd's *Vision 2025* update in Lloyd's 2012 Annual Report.
71. Lloyd's Strategy 2016–2018.
72. One Lime Street August 1998—interview with Chairman of Lloyd's.
73. Lloyd's Three-Year strategy—Building the Optimal Platform—January 2006.
74. One Lime Street May 1997—Corporation Business Unit Plans.
75. Lloyd's Office Gazette January 1976—Chairman's speech to Insurance Institute of London.
76. Dates represents points from which collective organizing was first considered.
77. Solutions implemented early in partial mutualization collective organizing supported solutions in other collective organizing elements. However, our data does not suggest that partial mutualization is 'the' factor that binds participants together. The potential for elements of collective organizing to have different weights of influence is an interesting area for future research and we thank our reviewer for drawing this to our attention.

78. Report of the Cromer Working Party (1969) p. 65.
79. One Lime Street November 1998, Explanatory Note ahead of Extraordinary General Meeting.
80. Lloyd's (January 1992) Lloyd's: a route forward; Report of the Task Force p. 62.
81. Lloyd's: a route forward Report of the Task Force January 1992 p. 226.
82. We thank one of our reviewers for drawing our attention to the Braudelian notion of distinguishing between events on the basis of their degree of relevance to structural change.

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Appendix 1

Data sources: primary

Data source	Date produced	Source overview
Lloyd's Office Gazette: 389 pages selected	1930–1992 Monthly, bimonthly from 1985	Initially a periodical for Committee staff for “social events... and stories, anecdotes and incidents connected with Lloyd's” by 1960 was directed more widely at those working in the market and gradually introduced articles on market matters such as financial results, Committee elections
Lloyd's Newsletter: 206 pages selected	1985–1992 Monthly	Newsletter for participants, directed at working participants—“material of specific interest and importance to the working community, including detailed information on decisions taken by the Committee and Council”—January 1985
One Lime Street: 399 pages selected	1993–2000 Monthly	Monthly newsletter for “the membership as a whole” focused on business issues, regular contributions from market participants; detailed Committee and Council updates, progress updates on change initiatives
Special Committee and Working Party documentation: consultation papers, interim reports, final reports	Adhoc, spanning 1969–2006	Documentation produced by various special committees and working parties, produced for Committee and/or consultation with market participants. Pre 1969 Special Committees covered in secondary sources, in particular Gibb and Wright & Fayle
Market Bulletins	1990–2021	Formal communication from Committee/ Corporation to Market Participants. Accessed via Lloyds.com;
Misc. Corporate Documentation: including governance papers, bye-laws, annual reports, AGM & conference speech transcripts	1970–2020	Documents with relevance to organizing decisions extracted from Lloyd's Governance Files, specific Board papers made available on request
Lloyd's Strategic Plans	2007–2021	Three Year plan ‘for the market as a whole’, published annually; written for market participants although publicly available; varying levels of specificity in planned initiatives and supporting rationale
Lloyd's Acts, Legislative Reform Order	1871, 1888, 1911, 1925, 1951, 1982, LRO 2008	HMSO copies of Lloyd's Acts, including 1871–1951 annotated amendments
Market Commentators: Insurance Trade Press, UK National Press	1820s–2021	‘Insurance Insider’ digital archives (1996 -) searched for all articles relating to Lloyd's organizing and collective decision making (i.e. excluding articles on performance, and specific losses) The Times newspaper digital archives searched (coverage of Lloyd's from 1820) for articles relating to organizing and collective decisions. Financial Times and Economist archive search for articles relating to Lloyd's organizing and collective decisions from 1990 onwards.

Data sources: secondary

Data source	Time period		Source critique: provenance, purpose, credibility
	Covered	Published	
Martin F, <i>The History of Lloyd's and of Marine Insurance in Great Britain</i> , Macmillan & Co pages: 414	1500s–1876	1876	The author is a professional writer and historian; historic account of the development of Lloyd's; full access to the archives of Lloyd's and assistance of The Committee; "Lloyd's today" chapter
Wright C & Fayle CE, <i>A History of Lloyd's: from the founding of Lloyd's to the present day</i> , Macmillan & Co pages: 475	1600s–1928	1928	Authors are a senior Lloyd's participant and a professional historian; historic account of the development of Lloyd's; full access to the archives of Lloyd's and assistance of the Committee; personal experiences; "Lloyd's today" chapter
Straus R, <i>Lloyd's: a historical sketch</i> , The National Book Association, Hutchinson & Co pages: 280	1574–1939	1939	The author is an author and biographer; historic account of development of Lloyd's; full access to the archives of Lloyd's and assistance of the Committee; Section on "Lloyd's in the Modern World" and "Lloyd's today" chapter
Beeman MM, <i>Lloyd's London: An Outline</i> , Windmill Press pages: 114	1930s	1947 (4th Ed)	Author is a Lloyd's participant; book is an outline of Lloyd's for laypeople and those interested in participating in the market; a brief chapter outlining the market's history (based on Martin and Wright & Fayle); level of detail on contemporaneous operations indicates high level of knowledge and access to market decision making and processes
Golding CE & King-Page D, <i>Lloyd's</i> , McGraw-Hill pages: 220	1940s–1952	1952	The authors are Lloyd's participants; an account of how business is carried out at Lloyd's and the services provided to the market, to shipping and commerce; support from the Committee and staff; brief chapter on the origins of the market; one of a series of insurance books by the publisher
Gibb DEW, <i>Lloyd's of London: a study in individualism</i> , Macmillan & Co pages: 387	1690s–1957	1957	The author is a senior Lloyd's participant; a 'semi-official history of Lloyd's'; historic account of development of Lloyd's with attention to organizing decisions; full access to archives and "several" chairman and committees of Lloyd's (book was the outcome of several years work); chapter on Lloyd's in the present
Hodgson G, <i>Lloyd's of London: a reputation at risk</i> , Penguin pages: 414	1970–1984	1984	Author is an historian and journalist; an critical account of the challenges facing Lloyd's in the late 1970s and early 1980s, with explanation of the historical reasons for practices and structures, written for lay reader; based on independent research and interviews with involved informants (market participants, analysts)
Duguid A, <i>On the Brink</i> , Palgrave Macmillan pages: 382	1986–2003	2014	Author is a recently retire senior executive of central actor (in role during the period covered), account of the crises and near failure of Lloyd's in 1980s and 1990s; full access to archives, corporate records and support of Committee; extensive interviews with participants