




Death of international organizations. The organizational ecology of intergovernmental organizations, 1815–2015

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Abstract

Under what conditions do international governmental organizations (IGOs) cease to exist? Surprisingly, leading theories of international organization rarely address this question. Across the theoretical spectrum scholars assume that international organizations have a high degree of “staying power”. Yet reality looks different. More than one-third of IGOs created since 1815 have since died. This article addresses the puzzle of why IGOs cease to exist. Using a combination of cross-sectional and survival analysis, I seek to identify factors associated with IGO termination. My analysis is based on a novel dataset coding detailed information on all IGO created since 1815, including their function, membership, and geographic span. Against prevailing theoretical expectations, my analysis demonstrates i) that overall mortality is high among IGOs, ii) that states often prefer to create new IGOs as opposed reforming existing ones, and iii) that having a large and heterogeneous membership is associated with greater organizational survivability. These findings indicate a need for refinement of existing theories of ‘institutional robustness’.

Keywords Intergovernmental organizations · Organizational ecology · Institutional and robustness · Institutional design, organizational mortality · Survival analysis

“International organizations seem to be immortal or at least long-lived”
(Bernholz 2009:361)

“International Organizations often produce undesirable and even self-defeating outcomes repeatedly, without punishment much less dismantlement”(Barnett and Finnemore 1999:701)

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When and why do international organizations cease to exist? Surprisingly, existing theories of international organization rarely address this question. Across the theoretical spectrum, scholars tend to assume that international institutions and their organizational embodiments are relatively robust in the face of environmental change—that is, they seldom die.¹ Hence, whereas International Relations scholarship offers a panoply of explanations for the creation, design, effectiveness, and longevity of international organizations, the field has yet to explore systematically the circumstances in which international organizations cease to exist.²

This article attempts to fill this gap by providing the first comprehensive analysis of the population of defunct international governmental organizations (IGOs) since 1815. My analysis is motivated by a striking puzzle. Whilst there is broad agreement among scholars that international organizations tend to endure, the historical record suggests otherwise. The Correlates of War (COW) Datasets contains data on 528 IGOs created between 1815 and 2005 of which 178 (or 34%) are coded as ‘Dead’ (Pevehouse et al. 2004). The novel dataset compiled for this article (which expands COW data until 2015) contains information on 561 IGOs created between 1815 and 2005, of which 218 (or 39%) have ceased to exist. Some of these organizations were formally dissolved, or their founding treaties expired; others suffered a violent death due to military conflict embroiling their member states; yet others appear to have lapsed into inactivity due to lack of funding or lack of demand for their services.

The scale of IGO ‘deaths’ over the past two centuries raises important questions for International Relations scholars. How, and under what conditions do IGOs cease to exist? Are some types of IGOs more likely to terminate than others? Answering these questions may shed light on important aspects of institutionalized international cooperation. For example, a population-wide analysis of IGO survivability promises to generate novel insights about the dynamics that tend to undermine international cooperation and about factors associated with relative organizational robustness. Most extant studies of ‘institutional robustness’ focus rather one-sidedly on a small handful of successful—that is, long-lived IGOs—while ignoring prominent organizational failures (for an exception, see Gray 2018). As a case in point, the large literature dedicated to explaining NATO’s survival and expansion after the Cold War contains surprisingly few references to (let alone focused comparison to) former alliances or security communities that dissolved once exogenous threat levels subsided (see, for example, Wallander 2000; McCalla 1996). We are, however, unlikely to discover the factors underpinning organizational longevity by examining only long-lived IGOs. Long-lasting

¹ Susan Strange (1998) asked ‘Why Do IOs Never Die?’ Assertions of IO robustness are also made by Keohane (1984:101–7); Jacobson et al. (1986); Stein (1990:51); Barnett and Finnemore (1999); Bernholz (2009:364); Johnson and Urpelainen (2012); Johnson (2013); Jupille et al. (2013); Kahler (2009). For a discussion of the ubiquity of the assumption that ‘IOs rarely die’, see also Shanks et al. (1996) and Vaubel (2006).

² There are important exceptions to this trend. Shanks et al. (1996) identify systemic changes which caused a decline in the IGO population between 1982 and 1991. More recently, Abbott et al. (2016) draw on organizational ecology theory to explain how changing environmental conditions have prompted an expansion of private transnational regulatory organizations at the expense of IGOs. Gray (2018) analyzes variation in the vitality of international economic organizations. Unlike the present article, however, these studies either examine patterns of entry/exit from the global IGO system at specific points in time, or limit their analysis to specific types of IGOs.

IGOs may share certain institutional features, but without also examining dead IGOs we cannot say for sure whether they had the very same attributes.

The article is structured as follows. Part 1 provides a brief discussion of leading explanations of institutional robustness to clarify the theoretical basis for the ubiquitous assumption that ‘IGOs rarely die.’

Part 2 turns to empirical analysis. My analysis is based on a novel dataset—the *Dead IGO-Dataset* (DIGO)—which records information on all IGOs founded between 1815 and 2005, recording their fate as of 2015. In addition to recording the fate of each IGO (whether ‘dead’ or ‘living’), the DIGO expands information entailed in the COW IGO-Datasets (version 2.3) by coding important contextual and design features of IGOs, including geographic region, issue-area, mandate, and type and size of membership. Combining cross-sectional and proportional hazard analysis, I compare the population of now defunct IGOs to organizational ‘survivors’ in search of common factors that may explain IGO mortality.

Part 3 offers a structured interpretation of my findings, using insights from leading theories of international cooperation to explain variation in IGO terminations. My analysis is theory guided insofar as my interpretation of patterns of IGO termination is structured by a general theoretical understanding of why states create and maintain IGOs, and how organizations adapt to change. I also discuss in some detail whether my empirical findings provide general support for one theoretical framework or another. However, I do not engage in explicit *ex ante* hypothesis-testing. As already mentioned, whilst they assume a high degree of institutional ‘staying power’, existing theories do not offer any concrete hypotheses about when or why IGOs die which can be subjected to systematic empirical testing. A competitive theory testing approach would therefore be premature, and might close off important avenues of inquiry. Instead, I adopt a more inductive, exploratory approach, which uses insights from existing theory to guide interpretation of the empirical data and identify avenues for future research and theory refinement.

My analysis yields several important findings. First, I find that IGO terminations are highly correlated with geopolitical conflict. This is true for both major systemic conflicts such as the two world wars, and for regional upheavals such as decolonization across Africa and Latin America. However, geopolitical upheaval alone cannot account for variation in IGO deaths without attention to organization-specific institutional features, such as issue-area, membership, and organizational span.

A second finding is that IGOs with global membership have significantly higher survivability than regional organizations. Similarly, IGOs that serve multiple, broadly defined functions have higher survivability than organizations with a narrowly defined purpose or function. The likely reason, I conclude, is that IGOs with broad, heterogeneous membership and/or broad functional remit are better able to diversify their activities, thereby increasing their adaptability and reducing vulnerability to either issue-specific or geographically specific shocks.

Two further findings are that technical or scientific IGOs are significantly less likely to die than other types, whereas security organizations have higher than average mortality. Furthermore, whereas security-oriented organizations tend to terminate during periods of geopolitical upheaval and tend not to be replaced, technical-scientific IGOs often terminate during peacetime and are frequently replaced by new organizations with similar mandates and functions. A likely explanation is that whereas

security-oriented IGOs tend to terminate due to exogenous geopolitical shocks which undermine their very *raison d'être*, technical IGOs are more likely to succumb to demands for organizational restructuring which cannot be achieved through standard institutional reform (see Klabbers 2002:320–25).

Overall, my analysis fails to point to a single dominant cause of IGO failure/survival. Instead, my findings suggest that different combinations of factors may produce a similar outcome.³ These combinations of factors appear to change over time. For example, whereas geopolitical conflict appears to play a significant role in IGO terminations during the twentieth century, patterns of organizational failure after the Cold War appear more likely to be driven by growing inter-organizational competition among an ever-expanding IGO population. The fact that IGO terminations do not appear to have a single cause, but may result from more complex (and possibly shifting) combinations of factors does not imply that IGO deaths can be regarded as random. Rather, it suggests there may be several distinct 'causal pathways' to IGO failure, which may be jointly or individually subjected to further study (see Mahoney 2008). I conclude by discussing the significance of my findings for existing theories, and pointing to avenues for future research.

1 Scope and key terms

My analysis focuses on international governmental organizations (IGOs), defined as organizations with at least three state parties, a permanent headquarters or secretariat, as well as regular meetings and budgets (Pevehouse et al. 2004). Contrary to more informal international institutions⁴ which may arise through diverse, and sometimes spontaneous processes, IGOs are created by explicit agreements among the governments of sovereign states (usually a constituent treaty or other legal instrument which gives them standing under international law). My reasons for focusing on IGOs as opposed to international institutions more broadly are two-fold. First, international institutions equipped with organizational apparatus can be explicitly disbanded through a decision of their member states, and thus formally cease to exist. By contrast, institutions without organizational structures can only disappear 'informally' insofar as the norms, rules, and principles of which they comprise cease to have any effect on state behavior (see Reus-Smit 2007;-Cotrell 2009). It is thus easier to determine the time and circumstances of death of formal IOs. Second, as I discuss in the next section, theoretical predictions regarding institutional robustness are generally stronger for formalized institutions

³ This is a case of so-called 'equifinality'; when a given end-state may be achieved via many different paths. Mahoney 2008.

⁴ I define international institutions as '(relatively) stable sets of interconnected rules, norms and practice that govern interactions in particular domains of international affairs' (see Krasner 1983; Keohane 1984) Even when endowed with formal organizational apparatus, international institutions (as sets of rules, norms and practices) and their organizations elements (IGOs) remain conceptually and to some extent practically separate. It is thus conceivable that the organizational element of an international institution could be abolished while the underlying institution would continue to exist. I discuss this possibility in a subsequent section, which explains the phenomenon of 'institutional succession'.

endowed with independent organizational apparatus and regular budgets, making deaths among such institutions theoretically more puzzling.

My definition of IGOs as organizations with more than two member states and permanent headquarters or secretariats excludes bilateral treaty organizations and international organizations whose primary members are not states.⁵ It also excludes ad hoc conferences or provisional international tribunals that lack permanent bureaucratic structures.⁶ The question arises, however, whether to include IGO ‘emanations’ (that is, organizations that are created by existing IGOs as opposed to being founded directly by states). The COW Datasets omit organizational emanations on grounds that they are not truly independent of the IGOs that created them (Pevehouse et al. 2004). By contrast, Shanks et al. (1996) include emanations in their study of the global IGO population, 1981–1992, on grounds that emanations make up the bulk of the present IGO population (see also Johnson 2013). My analysis leaves out IGO emanations. Although IGO emanations are associations of sovereign states, as Shanks et al. (1996:599) note, states generally join such organizations “simply by virtue of their membership in the parent organization” rather than through formal procedures of international treaty-making. As a result, the dynamics governing the creation and termination of IGO emanations may differ significantly from ‘first-generation’ IGOs.⁷ For this reason, my dataset includes only IGOs founded by *direct* agreement among states and excludes organizations that are created by or sub-ordinate to other IGOs (Pevehouse et al. 2004).

2 Existing literature: The robustness of international organizations

This section reviews leading explanations for *institutional robustness* (that is, the tendency for international institutions to endure, and even expand, despite changing environmental conditions or shifting constellations of state power and interests). This brief review serves to clarify the theoretical basis for the commonplace assumption that ‘IGOs rarely die’ and serves to ground and structure my interpretive analysis (Part 3) by identifying a set of theoretical concepts and assumptions relevant to explaining IGO death/survival.

Drawing on theories of international organization we can discern (at least) four general theories of institutional robustness. First, from a Realist perspective, international institutions are expected to be relatively insignificant and transitory. Realists hold that international institutions and organizations are created and maintained by powerful states in order to advance national interests. Since institutions merely reflect the (short-term) interests of powerful states, institutional change is expected to mirror either shifting constellations of power or endogenous changes in the interests of the system’s most powerful states (Gilpin 1981:14; Walt 1987; Grieco 1988; Mearsheimer 1995:7,13; Cotrell 2009:220). Nonetheless, since decision costs are high, and since states do not continually reassess their interests, institutions may sometimes endure

⁵ While most IGOs admit only states as members, some also accept non-state members, including NGOs. This article therefore defines IGOs as organizations whose *primary* members are states.

⁶ Although they may be constituted by treaty and possess physical headquarters, organizations created to deliver transitional justice (for example, the International Criminal Tribunal for the Former Yugoslavia or the Allied Control Councils after WWII) are intended to be non-permanent and thus do not qualify as IGOs.

⁷ Indeed, looking at the period 1981–1992, Shanks et al. (1996) find emanations died at a significantly higher rate than ‘first-generation’ IGOs.

even after shifts in power and interests, introducing an element of time-lag (Stein 1990:51).

In contrast to realism, the prevailing ‘Functionalist’ or ‘Rational Institutional’ approach to the study of international organization predicts a high degree of institutional robustness. On this view, states create international institutions in order to solve cooperation problems and to reduce the uncertainty and transactions costs associated with international cooperation (Keohane 1984). International institutions fulfill these functions chiefly by generating information. Formal international organizations equipped with independent administrative apparatus may also facilitate cooperation by providing monitoring and enforcement, and by helping states overcome problems of incomplete contracting through centralized rule interpretation and rule-making.

While rationalist institutionalists insist that international organizations will be created and maintained only insofar as they serve state interests, they nonetheless offer four reasons to expect that international organizations will often “persist even long after the original conditions for their creation have disappeared” (Keohane 1984:215). First, institutions are “easier to maintain than to construct” (ibid.102). Creating international institutions entails high negotiation and contracting costs. To avoid having to pay these costs repeatedly, states will often be prepared to maintain even suboptimal institutions “as long as the informational benefits generated by institutions exceed the costs of their maintenance” (opcit; Stein 1990:50–51). Second, once created, the value of an international institution tends to increase over time, as actors acquire institution-specific expertise (so-called ‘learning effects’),⁸ and as more states bring their behavior into conformity with an institutions’ norms and principles thereby increasing collective benefits (so-called ‘coordination effects’).⁹ Existing institutions thus yield increasing returns to cooperation, while new ones are subject to high start-up costs. Thirdly, international institutions are subject to ‘lock-in’ effects which mean that the political and economic costs of abandoning existing institutions increase over time. Institutional lock-in may arise from asset-specific investments by stakeholders who adapt their behavior to existing rule-sets in the expectation these will endure (Pierson 1996, 2000:252–5). Lock-in may also arise from cognitive biases that make actors loath to contemplate reform “as long as existing arrangements yield broadly tolerable outcomes” (North 1990). A final source of institutional endurance is scale-economies. As Keohane (1984:90, 101) explains, “once [an international institution] has been established, the marginal cost of dealing with each additional issue will be lower than it would have been without [an institution].” When faced with new problems, states will therefore generally choose to reform or expand existing institutions, rather than accept the costs and uncertainties involved in creating new ones (Ibid. See also Jupille et al. 2013:7). The result is that institutions “tend to evolve rather than to die” (Keohane 1984:107).

In contrast to Realists and Rational Institutionalists, Constructivists view institutional robustness mainly as a function of the legitimating and socializing effects

⁸ Learning effects obtain when “knowledge and expertise gained in the operation of complex systems, lead to higher returns from continuing use”. Pierson 2000:253; North 1990:95.

⁹ Coordination effects captures the idea that the benefits an actor receives from a specific activity increase as other actors adopt the same option. Pierson 2000:253; Keohane 1984.

of institutions, rather than their narrow instrumental value (Cotrell 2009: 223). Institutions provide contexts for social interaction, learning, and norm interpretation which shape actors' interests and identities. Over time, such processes lead actors to internalize norms and practices ingrained in institutions to the point that they come to be taken for granted (Finnemore 1993; Keck and Sikkink 1998; Cotrell 2009). Constructivists concede that dynamics of norm contestation may prompt institutional change (Cotrell 2009:220; Panke and Petersohn 2011). However, normative change is considered "inherently disruptive or difficult because it requires actors to question [] routinized practice and contemplate new practices" (Keck and Sikkink 1998:35). Once established, institutions are therefore expected to be relatively stable.

A final important perspective on institutional robustness is offered by organizational theories based in sociology. Such theories conceive of international organizations as independent actors in world politics, comprised of individuals and groups that strive to fulfill their own objectives, rather than merely serve the interests of their state creators (Ness and Brechin 1988; McCalla 1996; Barnett and Finnemore 1999; Vaubel 2006; Johnson 2013). On this view, international organizations frequently act strategically to expand their staff, budget, mandates, and indeed lifespan, against the interests of their state creators. As McCalla (1996:458) explains, even when an international organization's central task is accomplished, or no longer needed, its staff will generally not accept being obsolescent but will seek to identify new tasks to justify its existence, leading to a process of 'infinite goal succession' (see also Shanks et al. 1996:593; Bernholz 2009:364).

In sum, with the exception of Realism, major theories of international relations depict international institutions as highly robust due to a combination of high start-up costs, increasing returns from cooperation, and general social and political intransigence. Importantly, each theoretical framework leads to an expectation that formal international institutions with organizational embodiment (such as IGOs) are likely to be more robust than their informal counterparts. From a rationalist perspective, formal institutions which feature delegation to independent organizational agents are both costlier to create (and thus embody greater sunk costs) than their informal counterparts, and are also likely to generate greater efficiency gains due to their ability to assist states in negotiating, implementing and monitoring international agreements. All else equal, this provides strong incentives for states to maintain them. Due to their explicit, formal nature (which may entail demands for domestic implementation) international agreements overseen by IGOs are also likely to trigger a wider array of path-dependent processes which may impede a reversal of cooperation, and may have stronger legitimating and socializing effects. Finally, from an organizational theory viewpoint, delegation of authority to independent IGO 'agents' may give rise to entrenched bureaucratic interests and empower international officials to resist organizational dismantlement.

Clearly, the above theories should not be taken as 'iron laws' asserting that most IGOs are eternal. However, they may be understood as probabilistic statements to the effect that IGOs tend—on average—to be highly resilient, meaning that (a) they are relatively capable of weathering environmental change, and (b) they are generally long-lived. To what extent are these expectations consistent with empirical evidence?

2.1 The historical mortality of IGOs

The dataset compiled for this article shows that, of 561 IGOs created since 1815, 218 (39%) have since ceased to exist. How surprising is this mortality rate from the point of view of existing theory? Answering this question is not as straightforward as one might think. As already discussed, a theoretical assertion of robustness does not entail a prediction of organizational *immortality*. IGOs may be reasonably good at weathering environmental change or resisting obsolescence and still occasionally succumb to environmental shocks or internal crisis. Furthermore, whilst existing theories predict IGO longevity, this raises the question, ‘long-lived compared to what?’¹⁰ Take the example of the European Commission for Control of the Danube. Established in 1856 by the Treaty of Paris to regulate navigation and technical work on the lower Danube, the Commission exercised broad powers approaching those of a sovereign state, maintaining its own ships, police and courts (Krehbiel 1918). Widely perceived by its members as indispensable to ensuring the free flow of international commerce in Europe, the Danube Commission weathered the Austro-Prussian War of 1866, and adapted smoothly to the defeat of Germany in World War I, only to be dissolved in 1939 as the rapid expansion of Russian power in Eastern Europe undermined Western control of the important waterway. We might think it unremarkable—both intuitively and from the perspective of extant theory—that an IGO created in the mid-nineteenth century should have now ceased to exist. After all, it was created under distinct historical circumstances. Indeed, we might reasonably contend that the fact that the Danube Commission endured for more than 70 years before geopolitical events rendered it anachronistic is consistent with a theoretical expectation of organizational robustness. However, dismissing the termination of longstanding IGO as theoretically unchallenging in this way would be too quick. Consider that of twenty-four IGOs founded before 1900, eleven were still operative in 2015. This suggests that organizational death due to ‘old age’ or ‘historical anachronism’ cannot be regarded as an expected or banal event. To put it differently, given that half of IGOs founded during the nineteenth century are still alive today, the death of the other half cannot be simply regarded as a ‘natural’ outcome in need of no further explanation.

A second puzzle for extant theory arises from the fact that—unlike the Danube Commission—the historical lifespan of most IGOs has been relatively short.¹¹ The average ‘age-at-death’ for IGOs terminating between 1815 and 2015 is a mere 23 years. While this figure masks significant variation in the lifespan of individual organizations it indicates that many IGOs fail to reach old age, calling into question assumptions of robustness and longevity. Indeed, the historical record shows that many defunct IGOs terminated surprisingly soon after being created. Of 218 IGO deaths, 47 (22%) occurred within one decade of organizational founding, and 51% of deaths struck within two decades. Thus, while some IGOs

¹⁰ I thank Robert Keohane for bringing up this point

¹¹ To evaluate a general prediction of institutional longevity we would need to know the average lifespan of an IGO. Yet, since we are not dealing with an extinct or completed cohort, we cannot compute the average life expectancy of an IGO simply by averaging organizational ‘ages-at-death’. After all, present IGOs could in theory endure for centuries to come. What we *can* observe is that the average ‘age-at-death’ among the population of defunct IGOs is merely 23 years.

are long-lived, many die young. The inability of extant theories to account for such variation in survivability constitutes an important blind spot.

2.2 IGO mortality 1815–2015

This section turns to empirical analysis. I start by operationalizing IGO termination. Next, I conduct a cross-section analysis of the population of dead IGOs with the aim of establishing *when* and *how* these organizations disappeared. The following section uses a Cox Proportional Hazard analysis to identify specific factors that are associated with higher or lower IGO survivability. Part 3 summarizes and discusses my findings in light of existing IO theories, and points to avenues for further research and theory development.

2.3 A typology of IGO termination

Before analyzing patterns of IGO mortality it is necessary to clearly define the phenomenon we are seeking to understand. When can an international organization be said to have died? And what are the processes that may lead to its termination?

The COW IGO datasets use two simple criteria to define the death of an IGO. First, an IGO is coded as ‘dead’ if it has gone ten consecutive years without a plenary meeting or other evident activity. Second, an IGO is considered dead if it has been replaced by, or merged with, another organization (Pevehouse et al. 2004). These broad criteria, however, fail to distinguish the multiple paths through which an IGO may terminate. Knowing *how* an IGO terminates may hold important clues to understanding *why* it has terminated. In this section, I therefore draw on literature in international institutional law to specify five distinct mechanisms through which IGOs can die (Expiry, Dissolution, Succession, Merger, and Desuetude). These mechanisms are used to code individual cases in my dataset.

Expiry Most IGOs are created without a fixed time-period in mind since contracting states often do not envisage their termination, or cannot foresee precise circumstances that would warrant a suspension of cooperation (Klabbers 2002:320; Amerasinghe 2005:466). Nonetheless, some IGOs are established for a finite period, after which they dissolve lest states take steps to extend their legal basis. For example, the European Coal and Steel Community terminated in 2002 due to the expiry of its founding treaty.

Dissolution International law stipulates that any treaty may be terminated by the consent of its contracting parties (Vienna Convention on the Law of Treaties, Art. 57.b). In addition, many IGO statutes entail provisions for organizational dissolution by member state consent. Another possible mechanism of organizational dissolution is the formal withdrawal of all but two member states, as an organization then ceases to fulfill the criteria of an IGO (Amerasinghe 2005:466).

Succession When an IGO is formally dissolved, it ceases to exist as a subject of international law. In some cases, this brings a complete end to its activities, as was the case with the Warsaw Pact in 1991. In other cases, a defunct IGO may be replaced by a successor organization that takes over some, or all, of its functions (Wessels 2011:344–47; Schermers and Blokker 2011:1062–64). For example, when the

International Refugee Organization was dissolved in 1952, many of its activities were continued by the Office of the UN High Commissioner for Refugees (Amerasinghe 2005:464–65). Central Asian integration efforts have similarly taken a number different organizational forms, starting with the Central Asian Economic Community (CAEC, 1994–2005) which was reorganized in 2001 under a new name, the Central Asian Cooperation Organization (CAC), only to be absorbed into the Eurasian Economic Community (EurAseC) in 2005. EurAseC was in turn replaced by the Eurasian Economic Union (EAEU) in 2015 (YIO 2018; Gray 2018).

Cases of institutional succession raise difficult questions about how to define IGO death. Whenever an IGO is replaced by a successor we may reasonably ask whether the original organization can truly be regarded as dead, or whether it lives on—just in a new legal form. Institutional lawyers have sought to resolve this difficulty by distinguishing cases of institutional replacement (also referred to as 'legal substitution') according to the degree of institutional change involved. On this view, an IGO that seeks to rejuvenate itself by changing its name or moving its headquarters with minor changes to its membership or mandate is regarded as being in *continuous existence*. The reorganization of the CAEC into the CAC in 2001 falls into this category, as does the Union of American Republics which was renamed the Organization of American States in 1948 without significant changes to its composition or role (Klabbers 2002:325, Wessels 2011). By contrast, if institutional replacement involves deeper changes in mandate or membership, it is considered that the original organization has terminated and been replaced by a successor.¹² An example is the termination of the League of Nations and its replacement by the United Nations.¹³ All cases coded as 'Successions' in my dataset are cases in which the replacement of an existing IGO involves significant changes in membership, mandate or function, implying that the original organization has to exist both practically and legally.

Merger/absorption Termination by merger occurs when two IGOs unite to form a new organization. An example is the merger of the European Launcher Development Organization (ELDO) and the European Space Research Organization (ESRO) to form the European Space Agency in 1975.¹⁴ By contrast, death by absorption occurs when an IGO is incorporated into another organization whose legal identity prevails (Amerasinghe 2005:473). Examples include the integration of the International Bureau of Education into UNESCO in 1969)¹⁵ or the absorption of the CAC into EurAseC in 2005 (see above).

Desuetude Not all defunct IGOs are formally terminated through either expiry, dissolution, succession, or merger. Many organizations simply 'fade away' due to inactivity. Sometimes states stop contributing funds or personnel to an IGO (Gray 2018); at other times, withdrawal by core member states may leave an organization paralyzed. Still, the

¹² Formal succession must be distinguished from informal replacement. E.g., the creation of the OAU in 1963 resulted in the gradual disuse and eventual disappearance of the Conference of Independent African States. As there was no formal transfer of functions from the CIAS to the OAU, this is not a case of succession (Wessels 2011).

¹³ When the League of Nations dissolved in 1946 several of its functions were formally transferred to the UN.

¹⁴ ELDO and ESRO were formally dissolved when the ESA Convention came into force (Wessels 2011).

¹⁵ 'Records of the General Conference, 15th Session, Paris 1968: Transfer to UNESCO of the resources and responsibilities of other IOs', p.108.

organization may not be officially dissolved (Schermers and Blokker 2011:1056). Institutional lawyers use the term ‘desuetude’ to refer to the “termination of treaties by virtue of the passing of a considerable lapse of time during which the treaty is not applied by the treaty parties”.¹⁶ Pevehouse et al. (2004) apply a similar principle to IGO statutes, judging that an IGO that has shown no sign of activity for more than 10 years has terminated, whether or not it continues to exist on paper.

Like cases of institutions succession, cases of desuetude raise an interesting question about how to conceptualize and operationalize IGO death. As Julia Gray (2018) observes, the vitality of IGOs varies tremendously, not only between organizations but also across time, suggesting that a binary live/dead distinction may miss the fact that some organizations drift in and out of operation. She suggests that the world’s international organizations fall into three categories: those that are alive and functioning; those that have died through exit or abandonment; and those that persist in name, but show minimal levels of activity (‘zombies’). The last category may include organizations that lie dormant for years only to suddenly spring back to life (ibid.). Gray cites the case of the Arab Maghreb Union which stopped convening meetings in 1994, when Libya refused to take over the rotating presidency, only to resume its activities in 2012 after the Arab Spring. I acknowledge that IGOs vary greatly in their level of activity; some being extremely vibrant, others amounting to little more than empty shells. Since providing a measure of ‘vitality’ for the entire population of IGOs, past and present, would be a near impossible task, however, I adopt a simpler live/dead distinction. I find that most IGOs that show no signs of activity for more than ten years remain inactive. I thus follow scholarly convention in classifying such IGOs as dead (Pevehouse et al. 2004).

2.4 Data and coding

My analysis is based on a novel dataset that contains information on 561 IGOs founded between 1815 and 2005, recording their fate as of 2015. The main data were taken from the COW IGO dataset.¹⁷ This data was supplemented with data from the Yearbook of International Organizations, various handbooks and encyclopedias, UN treaty collections and information from individual IGO websites. The resulting dataset includes all but twelve organizations listed in the COW IGO datasets,¹⁸ plus an additional forty-three organizations not listed in COW (either due to omission, or because information on their founding may have become available since that dataset was last updated), bringing the total to 561.

As already discussed, whilst they provide an invaluable resource for studying IGOs, the COW IGO datasets contain limited information on how deceased international organizations have died. They further fail to distinguish organizations according to mandate or geographic region, essentially treating all IGOs as functionally and geographically equivalent. To provide a more fine-grained picture, I therefore code

¹⁶ The idea, explains Kohen (2011:352) is that a failure by all parties over a prolonged period to apply or invoke a treaty may amount to tacit agreement to regard it as terminated.

¹⁷ I have crosschecked this information as far as possible before incorporating it into DIGO, making a note of any significant corrections in the Codebook.

¹⁸ Twelve IGOs listed in COW-2.3. have been removed since they fail to meet the stipulated criteria for an IGO. See Appendix.

five different design features of IGOs.¹⁹ Additionally, for defunct IGOs, I have coded information on both when and *how* they terminated.

The first design feature, *Number*, counts the number of member states. I record this both at beginning and end of an IGO's life (or, in the case of surviving IGOs, as of 2015), to obtain an additional measure of organizational growth over time.

The second feature, *Membership*, refers to the rules for who can join an IGO. Following Shanks et al. (1996), I distinguish between 'Inclusive' organizations whose membership is in principle open to all states, and 'Restrictive' organizations that limit their membership according to either geographic or functional criteria.

Mandate describes an organization's focus and role as formalized in its founding documents. When coding mandate, I distinguish six main functions or issue-areas: 'security' (e.g., institutionalized alliances, collective security organizations, and disarmament organizations), 'economic and political cooperation' (e.g., organizations focused on finance and investment, trade, or transportation), 'social welfare cooperation' (inter alia, education, human rights, health, and environment), 'judicial functions' (e.g., international courts and tribunals), 'technical support/research', and 'general purpose' IGOs. These categories are not mutually exclusive. For example, some economic organizations also fulfill technical and social welfare functions, and some even have judicial aspects. Nonetheless, most IGOs have a primary role or focus to which other functions are subordinate. Organizations whose role clearly span more than one area (for example, organizations that have both economic and security functions) are categorized as 'general purpose'. The European Union is a clear example of such an organization. (A detailed explanation of coding criteria is provided in the Appendix).

Organizational *scope* refers to the range of issues covered by an IGO. At one end of the spectrum are broad IGOs such as the UN, which focus on a range of highly diverse economic, security and political goals. At the other end are narrowly specialized IGOs that focus on few limited, technical issues (Koremenos et al. 2001:770). In between lie organizations with medium scope that link several related issues (say, finance and trade) but whose roles and activities are nonetheless confined to a single issue-area (e.g., economic cooperation).

Region codes the geographic region in which an IGO's members are based (as opposed to where its primary activities are conducted). Following Shanks et al. (1996), I define IGOs whose membership spans more than a single region, but that nonetheless have geographically restricted membership as 'Intercontinental'. The Commonwealth organizations mostly fall into this category, being neither regional nor truly global. IGOs with global span, such as the UN, are coded as 'global'.

One could identify additional features of institutional design that might hypothetically influence IGO robustness. For example, Boehmer et al. (2004) code IGOs according to their degree of institutionalization.²⁰ They find that highly institutionalized IGOs with a measure of bureaucratic autonomy are more likely to promote peace among member states than minimally institutionalized organizations (on the benefits of bureaucratic autonomy, see also Gray 2018). One might hypothesize (for similar

¹⁹ Two research assistants have helped collect information on lesser known IGOs. I have personally coded all entries in the dataset based on multiple sources including encyclopedias and yearbooks of international organizations, treaty agreements, diplomatic documents, scholarly books and articles, and - when available - organizational website.

²⁰ Unfortunately, Boehmer et al. limit the temporal domain of their analysis to 1950–1991.

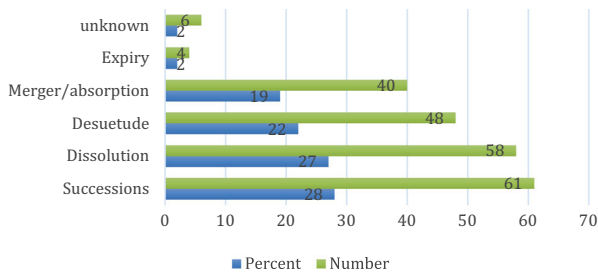


Fig. 1 IGO deaths, 1815–2015

reasons) that highly institutionalized IGOs are less likely to terminate than organizations with low institutionalization. Other potentially relevant features are organizational budgets and voting-rules. Are IGOs with larger budgets on average more robust? Or do limited budgets allow some IGOs to survive ‘under the radar’? Does qualified majority voting extend the life-span of an IGO by helping to avoid deadlock? However, comparing attributes such as degree of institutionalization or voting procedures for IGOs founded centuries apart would be fraught with ambiguity and imprecision owing to the historically specific nature of such aspects, and to the fact that both institutionalization and IO autonomy may vary over time (see Gray 2018). Similarly, measuring and comparing the budgets of IGOs operating during the nineteenth century with contemporary peers would be relatively meaningless. I therefore concentrate my initial, population-wide analysis on basic features such as Mandate, Number, Region, and Membership which can be accurately measured and compared across a large, heterogeneous population spanning two centuries.

2.5 Models and results

This section presents empirical results of my analysis of mortality among the global IGO population 1815–2015. I first present descriptive statistics on IGO foundings and terminations. Next, I use proportional hazard analysis to compare the relative mortality of different kinds of IGOs in different settings. While previous studies have documented variation in IGO founding rates during different historical periods (Wallace and Singer 1970), or examined rates of organizational entry/exit from the IGO system during specific periods (Shanks et al. 1996; Abbott et al. 2016), or for specific kinds of organizations (Gray 2018), so far, none has studied rates of mortality/survival or examined variation in institutional design features across the population as a whole, from its inception to the present. My analysis thus adds empirical breadth to existing knowledge about IGO design and robustness.

2.6 How have IGOs died?

Of 218 IGOs that have died since 1815, fifty-eight (27%) terminated through dissolution, while forty-eight (22%) disappeared through desuetude. Forty IGOs (19%) were absorbed by or merged with another organization, while 61 (28%) were replaced by a successor. Only four IGOs terminated due to their founding

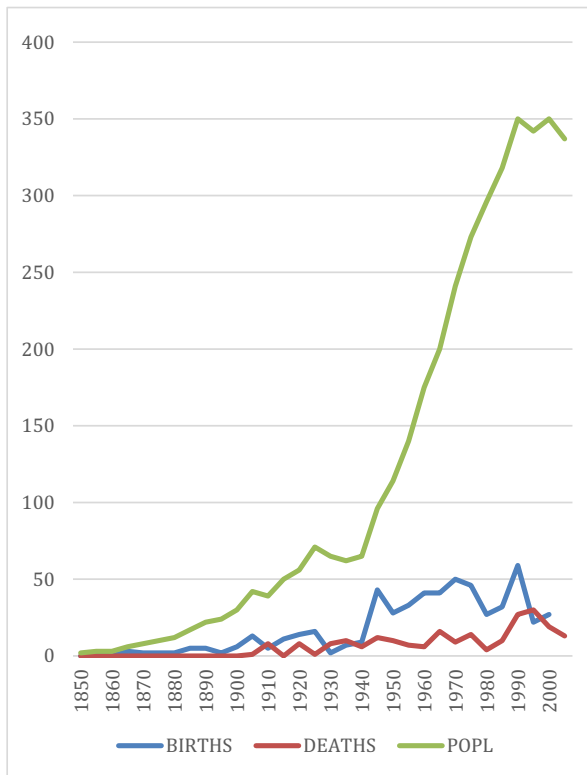


Fig. 2 IGO births, deaths, and overall population growth, 1850–2005

treaties expiring. In sum, the majority of IGO deaths resulted from an explicit decision by contracting states to terminate cooperation, whereas a smaller subset of IGOs (less than a quarter) were left to fade away through desuetude, or allowed to expire (Fig. 1).

2.7 When have IGOs died?

Figure 2 depicts IGO births/deaths per decade since 1850.²¹ Despite a steady growth in the total number of IGOs in the system over time (shown by the upper, green curve), the figure reveals a high rate of organizational turnover, as existing IGOs have died in significant numbers, while new ones have been founded.

Figure 3 shows IGO deaths per decade since 1850 as a *proportion of the population* of IGOs in existence during each decade.²² The figure shows a

²¹ I only display deaths from 1850 since the earlier population is too small to provide a meaningful picture.

²² A figure depicting absolute numbers of deaths per decade is included in Appendix 1 (Fig. 7). Yet, given a steadily growing population, absolute deaths provide a less informative measure of mortality than relative deaths.

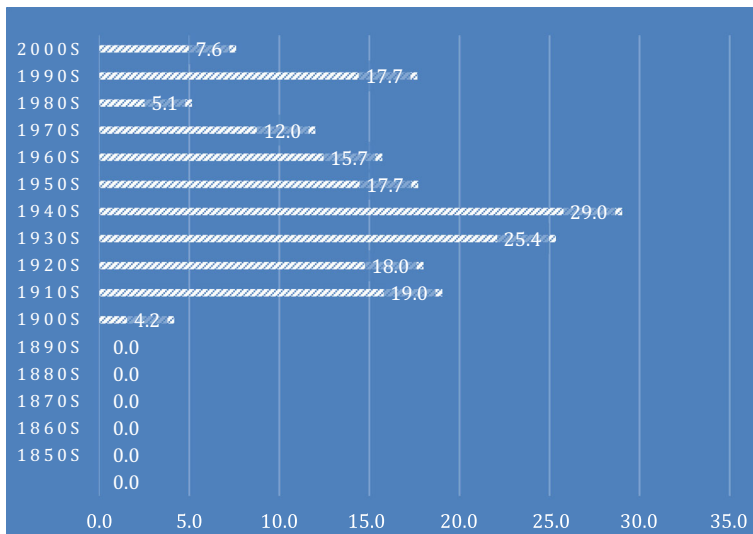


Fig. 3 Decadal mortality-ratios, (as % of existing population)

significant spike in mortality-rates during the 1910s, 1930s and 1940s—coinciding with the two World Wars and the Great Depression. For example, eight IGOs terminated between 1910 and 1919 (equal to 19% of the incumbent population) compared to just one fatality during the previous decade. The 1930s and 1940s also had high mortality-rates (respectively 25% and 29% of the incumbent population).²³ Global mortality rates remained medium-high during the 1950s and 1960s with deaths mainly concentrated in Africa (see discussion below). Mortality-rates dipped worldwide during the 1970s and 1980s, only to rise again during the 1990s, when 18% of the incumbent population terminated in a single decade (compared to just 5% during the 1980s). Although new IGOs continued to be born during periods with high mortality, IGO founding-rates slowed markedly around the world wars and at the end of the Cold War, resulting in a *negative growth-rate* for the population during the periods 1905–1914, 1925–1944 and 1990–2000.²⁴ By contrast, the years immediately following each world war saw a sharp increase in new IGO births.

2.8 Mortality, 1815–2015: Survival analysis

The descriptive statistics presented so far paint a crude picture of population development, which suggests that IGOs deaths are strongly correlated with shifts

²³ Using Gregorian calendar decades to depict fatality-ratios may appear somewhat arbitrary in terms of capturing the impact of particular geopolitical events, such as on IGO death-rates. I have therefore included a second figure that uses different ‘cut-offs’ to separate decades (Fig.8, Appendix). Like Fig.3, this figure also highlights the devastating effects of the world wars, accentuating the death-toll associated with WWI, but slightly downplaying the effect of the end of the Cold War.

²⁴ The late 1980s and 1990s saw IGO birthrates dip below 1960s levels—a trend which continued into the 2000s. This is consistent with findings by other scholars that the growth of new IGOs has slowed around the turn of the 21st century, possibly due to the rise of new forms of international organizations. See especially Abbott et al. 2016.

in international power balances and geopolitical conflict. However, knowing that IGO mortality-rates spike during periods of global conflict tells us little about *how* organizational terminations are linked to conflict, or what types of IGOs are most vulnerable to termination. This section therefore seeks to add more detail and precision to the analysis by comparing mortality rates for different regions and different types of IGOs using a form of survival analysis known as ‘event-history’ or ‘proportional hazard’ analysis. In addition, I include a brief case study which examines more closely the profiles of IGOs that survived a major geopolitical crisis; World War I.

Table 1 shows the general results of my proportional hazard (PH) analysis, which measures variation in mortality rates across different subsets of the population. Like all PH models, the model relates the time that passes before a specific event occurs (in this case IGO termination) with various covariates that may be associated with that length of time. A PH analysis measures the unique effect of each co-variate on the hazard-rate, and is thus ideally suited to isolating the independent effects of different institutional design or contextual factors. For example, the model shows that being situated in a specific geographic region (say, Europe) increases an IGO’s hazard-rate for termination, while having a specific mandate (e.g., technical or scientific assistance) decreases the hazard-rate. The population at risk is the set of all IGOs in existence at any given time, while ‘fatalities’ or ‘hazards’ include all IGOs that terminate through either Expiry, Dissolution, Desuetude, Succession or Merger/Absorption within the specified time-frame.

Some might object that my dependent variable (IGO death) takes several different forms which ought to be further separated for analysis. Whilst all IGOs coded as ‘dead’ in my dataset have fully ceased to operate, these organizations have ceased through different procedures, and with different consequences. When an IGO is dissolved or its founding treaty expires, this brings a full close to its activities. By contrast, cases of institutional succession (which are defined by a formal transfer of functions from a moribund IGO to a legal successor) entail an element of continued cooperation among states on some (sub)set of issues within the defunct IGO’s mandate. We may wonder, therefore, whether IGO successions (or mergers) are governed by different factors than terminations that occur through dissolution, expiry or desuetude. To explore this possibility, I have run the PH model twice with two separate dependent variables. In the first instance my dependent variable is *all* cases of IGO deaths (including successions). In the second, I count only terminations by dissolution/ desuetude/expiry, treating other terminations as equivalent to ‘continued existence’.

Starting with the impact of *Region*, I find that IGOs with global membership have significantly lower hazard-rates than regional organizations (Table 1).²⁵ Among regional IGOs, the highest hazard-rates are among European organizations. Taking the hazard-ratio of global IGOs as a baseline, European IGOs are seven times more likely to terminate than global IGOs during the two centuries under scrutiny. African and American regional organizations are about six times more likely to terminate than global IGOs. Regional organizations in Asia and the Arab world have lower hazard-

²⁵ IGOs with global span have a cumulative failure-rate of 28%, compared to for 41% regionals across the period under study. As I discuss later, this may be due to the generally smaller ‘Number’ of regional organizations which, by definition, cannot attract as many members as global IGOs.

Table 1 Proportional hazard analysis

Independent Variables	Dependent Variables	
	All Deaths, including Successions	Death = Expiry, Dissolution, Desuetude
Number of Member States		
Number at death (or as of 2015)	-0.032*** (0.005)	-0.045*** (0.008)
Region		
Africa	1.860*** (0.599)	0.356 (0.601)
Americas	1.767*** (0.599)	0.778 (0.577)
Asia	1.372** (0.655)	0.168 (0.672)
Europe	1.975*** (0.576)	0.845 (0.536)
Middle-East	1.156 (0.721)	0.674 (0.675)
Intercontinental	1.563*** (0.552)	-0.059 (0.493)
Mandate/Function		
General Purpose	-0.823* (0.494)	-0.589 (0.781)
Judicial	0.578 (0.623)	0.916 (0.777)
Security	0.260 (0.251)	0.581** (0.287)
Social	-0.311* (0.182)	-0.670*** (0.255)
Technical/Scientific	-0.507** (0.239)	-0.754** (0.331)
Membership Form		
Geographically restricted	-2.968*** (0.568)	-2.287*** (0.550)
Purpose restricted	-2.319*** (0.556)	-1.152** (0.509)
Scope		
Narrow	-0.545 (0.431)	0.287 (0.671)
Medium	-0.818* (0.450)	-0.109 (0.694)
No. observations	553	553
R ²	0.200	0.189
Max. Possible R ²	0.989	0.935
Log Likelihood	-1187.559	-697.983
Wald Test (df = 17)	88.400***	94.480***
LR Test (df = 17)	123.353***	115.732***
Score (Logrank) Test (df = 17)	96.266***	101.876***

The overall co-efficient for regional (compared to global) IGOs is: 'AnyRegion' 1.672***

Statistical significance

* $p < .10$, ** $p < .05$, *** $p < .01$

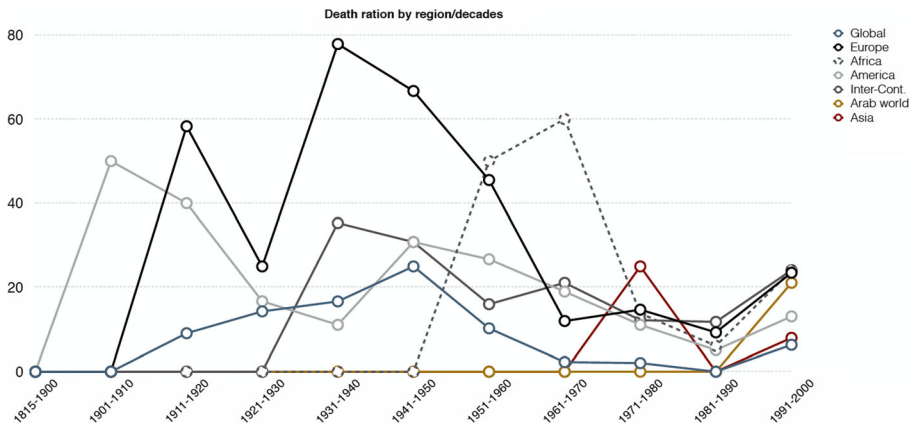


Fig. 4 Terminations (%population) by Region/Time

rates. However, as these regions have relatively small and young IGO populations, these findings are not statistically significant.²⁶

We can refine this picture by looking for variation in *when* mortality spiked across different regions. Figure 4 shows decadal mortality-ratios for different regions of the world. Mortality among European IGOs peaked between 1910 and 1919 (60%), and during the 1930s and 1940s when respectively 78% and 67% of the European IGO population terminated (compared to 25% and 29% globally). Mortality-rates remained high in Europe during the 1950s but dropped significantly between 1960 and 1990. As noted above, Africa experienced the highest mortality-rates during the 1950s (50%) and 1960s (60%), coinciding broadly with decolonization.²⁷ IGO mortality increased across all regions at the end of the Cold War.

Turning next to *Mandate*, the PH model shows hazard rates to vary significantly according to the types of problems IGOs address. The lowest hazards are among IGOs with technical or scientific focus, and IGOs with general purpose.²⁸ Social organizations also have low hazard ratios compared to economic organizations (the base-line group), while the highest hazard-rates are among security organizations.²⁹ The finding that security organizations have the highest hazard rates, however, is only significant in the model in which successions are treated as survivals. This makes intuitive sense, since we may speculate that security IGOs are more likely to terminate due to geopolitical events which undermine their very *raison d'être* (thus foreclosing continued cooperation on similar issues), while technical IGOs are more likely to succumb to demands for organizational reform, which for some reason cannot be achieved through standard reform procedures (See Klabbers 2011). In this latter case, continued demand for common solutions to technical problems may lead to continued cooperation within the framework of a new organization. Indeed, when examining *how* different kinds of

²⁶ The first Asian regional IGO, the Asian Industrial Development Council, was founded in 1966. The first Arab IGO, the Arab Organization for Standardization and Metrology, dates to 1965.

²⁷ The 1960s also saw the termination of several intercontinental IGOs which brought together African countries and (former) colonial powers to manage African affairs, including the Commission for Technical Cooperation in Africa South of the Sahara (d.1965) and the Inter-African Committee on Statistics (d.1965).

²⁸ But note that these numbers are associated with lower statistical significance.

²⁹ Judicial organizations have high hazard-rates but the result is not statistically significant.

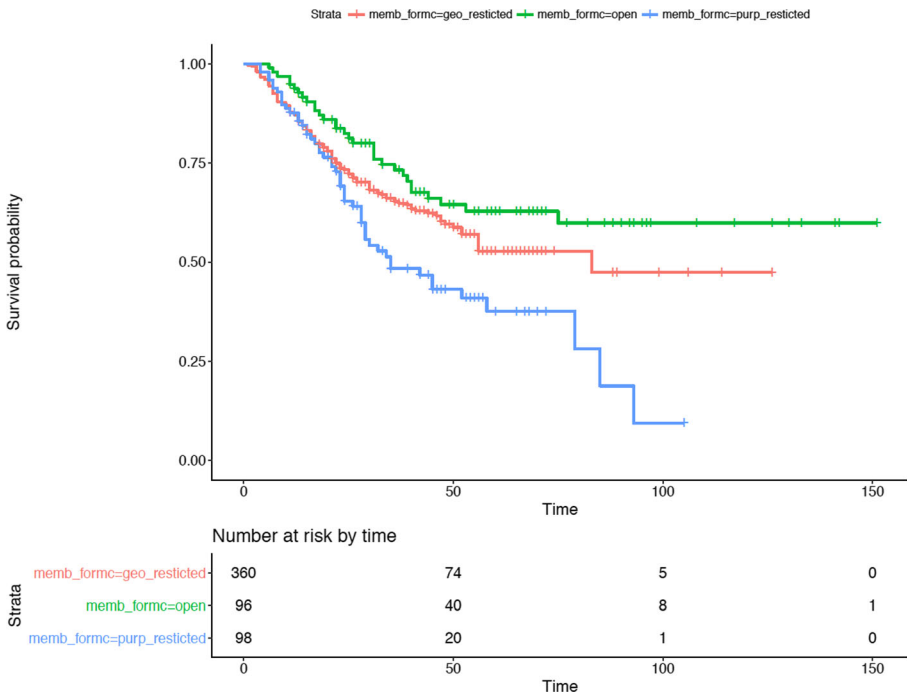


Fig. 5 Hazard ratios according to membership form (Open/Restricted)

IGOs terminate, I find that technical IGOs are more prone to terminate through succession or merger than other functional types. Security and economic IGOs, by contrast, tend to terminate through dissolution or desuetude (see Table 3, Appendix). This lends support to the notion that security organizations often terminate because their services are no longer desired, whereas technical IGOs may terminate due to demands for functional re-organization (I discuss these findings in more detail in the concluding section).

In terms of *Number*, I find that a large membership lowers risk of termination. To capture the impact of *Number*, I have coded the number of member states for all IGOs at the beginning and end of their lifespan.³⁰ In all model specifications, the last recorded *Number* is a statistically strong predictor of termination, with an inverse correlation between *Number* and mortality so that having more members lowers risk of death. This finding must, however, be treated with caution, since it is plausible that successful IGOs attract more members over time whereas ineffective organizations lose members, implying that *Number* may be confounded with other survival enhancing factors such as, say, ‘organizational effectiveness’. Nonetheless, as I discuss in Part 3, there are several plausible theoretical explanations for why the size of an IGO’s membership—in and of itself—may lower IGO hazard-rates.

Looking at *Membership* I find that ‘inclusive’ IGOs have higher survivability than organizations that restrict membership according to either geographical or functional criteria. Most IGOs with inclusive membership, however, are also global in span,

³⁰ Or, in the case of still living IGO, the latest date that reliable membership figures were available, generally 2015 but in some cases 2005.

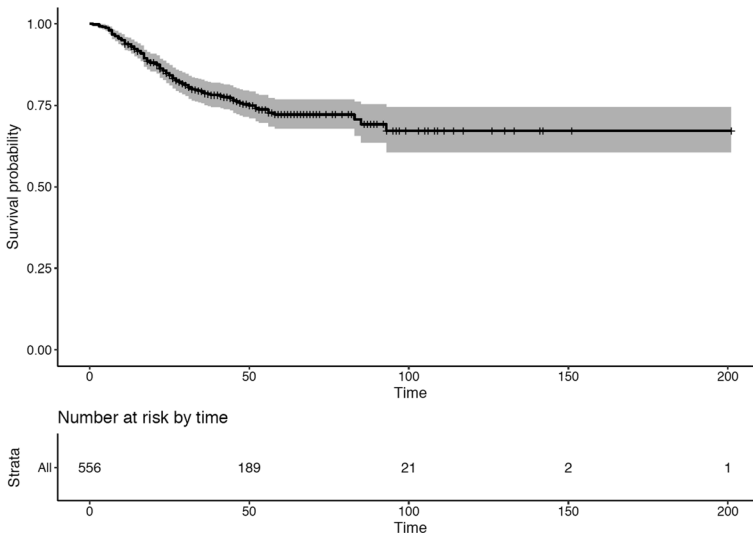


Fig. 6 Hazard-rates over time

meaning that this variable may capture a mixed impact of its own variation and variation in the geographic *Region* variable (Fig. 5).

Having recorded the lifespans of individual IGOs allows me, lastly, to consider the impact of *organizational age* on survivability. Interestingly, I find that an IGO's survival rate drops relatively rapidly during the first three decades of its life, then tails off after 30 years, only to stabilize at about 50 years of age. In other words, once an IGO makes it through a perilous youth during which it appears particularly vulnerable to failure (perhaps due to being poorly consolidated?) its prospects of survival improve. This might suggest that organizational survival is positively dependent on age, so that the older an IGO is the less likely it is to terminate.³¹ I discuss possible interpretations of this finding in Part 3 (Fig. 6).

2.9 Further analysis: World War I

My analysis so far has shown a clear correlation between geopolitical upheaval and IGO deaths. That IGO mortality-rates increase during periods of geopolitical turmoil is theoretically unsurprising. Whether one adopts a realist, rational institutionalist, or constructivist perspective, dramatic shocks to the international system, such as armed conflict, are expected to trigger institutional change—either as a direct result of changing balances of power and interest (Gilpin 1981:14; Ikenberry 2001:3), as a result of changing cost-benefit calculations (as new constellations of interest reduce the future expected benefits from present institutions), or as a result of normative contestation which “loosen(s) commitments to existing identities and behavioral

³¹ This finding must be treated with caution for two reasons. First, the fact that we are dealing with a declining population at risk, means that measures of survival probability at the far end of the spectrum (100+ years) are uncertain. Second, age may be confounded with several unobservables that may affect IGO survivability, such as the historic circumstances of an IGO's creation and lifespan. E.g., the significant difference between a 50 and 100 years old IGO may not merely be 50 years of age, but also the fact of being created pre- vs. postwar.

Table 2 Mortality-rates, World War I

	Deaths	Survivors	Total	Morbidity
Region				
Global	4	21	25	16%
Europe	9	3	12	75%
Americas	2	3	5	40%
Africa/Asia	0	0	0	–
Intercontinental	1	4	5	20%
Total	16	31	47	34%
Membership				
‘Open’	4	20	24	17%
‘Restricted’	12	11	23	52%
Total	16	31	47	34%
Function				
Economics	6	4	10	60%
Security	2	0	2	100%
Social	4	8	12	33%
Technical	2	17	19	11%
Judicial	1	1	2	50%
General Purpose	1	1	2	50%
Total	16	31	47	34%
Average Number 1914	7	14		
Average Age, 1914	22	23		

norms”, thereby undermining the legitimacy and stability of existing institutions (Kowert and Legro 1996; Panke and Petersohn 2011). Nonetheless, while many IGOs have succumbed to geopolitical conflict since 1815, many more have survived. What, if anything, distinguishes ‘survivors’ from ‘casualties’?

The proportional hazard analysis presented in this part points to several possible ‘robustness enhancing’ factors (for example, large Number) which may boost an IGO’s survival prospects. Given the substantial variation in these factors across the population and across the time period under study, the best way to examine whether these features do in fact exert a protective effect during times of crisis is to directly compare the features of IGOs that survived a specific geopolitical shock to those that terminated. With this aim, this section briefly examines the effects of World War I on the global IGO population. Observing the effects of a large exogenous shock at a time when the global IGO population was still relatively young and geographically concentrated allows me to isolate the effects of specific institutional factors such as Number, Membership and Mandate, while holding constant other, possibly confounding, factors such as organizational age and historical founding moment.

As illustrated earlier, the global IGO population grew steadily during the nineteenth and early-twentieth century. Between 1815 and 1914, forty-eight IGOs were created worldwide, while just one terminated. On the eve of World War I, the global IGO population thus counted forty-seven organizations. Of these, nine terminated during the

war (1914–1918), whilst another eight terminated within ten years of the Versailles Peace Settlement of 1919 (and thus within 10 years of the formal end of hostilities). Based on my definition of Desuetude (>10 years of inactivity), I treat all these as probable war casualties. By contrast, any IGO still functioning after 1929 is considered a survivor even if it subsequently terminates. These criteria yield sixteen fatalities and thirty-one survivors of World War I. (A list and description of these organizations is included in the Appendix). What, if anything, distinguishes the two categories?

The profiles of World War I fatalities support findings from my previous analysis. Most terminations occurred among regional IGOs in Europe. Between 1914 and 1929, European IGOs were more than four times as likely to terminate as IGOs with global membership (see Table 2). Similarly, IGOs with restricted membership were three times as likely to die as inclusive IGOs. In terms of mandate, the lowest hazard-ratios were once again among technical IGOs (11%) and among organizations focused on social issues (33%), while the highest hazard-rates were among IGOs focused on security, followed by economic and judicial cooperation (Table 2).³² Surviving IGOs had on average twice as many members as those that succumbed. Organizational age does not correlate with mortality during this period.³³

In sum, IGOs that survived the Great War mostly had wide geographic scope, large Number and technical focus. Having survived World War I, eighteen of thirty-one ‘World War I veterans’ went on to also survive World War II, and fourteen are still alive today. As they have advanced in age, these IGOs have increased their Number from an average of eighteen members in 1914 to an average of 125 members in 2015, presumably further enhancing their robustness.

Space does not allow me to include a more detailed case study of these long surviving IGOs. However, a few observations stand out. It is noteworthy, for example, that long-term survivors mainly included organizations focused on narrow technical or administrative issues and with global membership. These included, *inter alia*, the International Telecommunication Union (1865), the Universal Postal Union (1874), the International Bureau of Weights and Measures (1875), the International Union for Protection of Industrial Property (1883), the International Union for Publication of Customs Tariffs (1890), and the World Road Association (1908). Established to enhance international interoperability by standardizing postal rates, radio communication and road signs, these organizations were of great practical value but had limited geopolitical consequences.

Some technical organizations did succumb to the war. An example is the International Secretariat for the Unification of Pharmacological Terms (ISUPT). Founded in 1902 to standardize drugs terminology, ISUPT membership was in principle open to all countries. However, at the time World War I broke out, ISUPT's membership was still limited to nine contracting parties, including the USA and eight West European states. As the war limited opportunities for travel and reduced funding, ISUPT's activities soon ground to a halt. Efforts to

³² Given the small numbers involved these percentages are hardly reliable. However, they lend additional support to previous findings.

³³ This may be due to the relative youth of the WWI population as a whole. However, it might also imply that greater Number and geographic span (rather than its age per se) is what accounts for the greater survivability of older IGOs in the wider dataset. I leave this for further analysis.

standardize drug terminology were, however, renewed during the interwar period, and the functions envisaged for ISUPT eventually came to be fulfilled by the WHO after 1948. In this case, the fact that conflict broke when ISUPT was still newly established and poorly consolidated thus may have played a significant role in its demise.

Since geographic span and location appear crucial to organizational survivability during times of geopolitical upheaval, it is instructive to look more closely at European-based regional IGOs. Only three European organizations survived World War I. One was the International Conference for Promoting the Technical Unification of the Railways (founded 1882). Despite focusing on a seemingly technical issue (ensuring uniformity in rolling stock exchange to ease railway transport across the Continent) this organization was strongly politicized due to the nature of the war effort, which involved large-scale mobilization of troops by rail. Whilst it survived the war on paper, and even expanded its membership, the struggle between Germany and France for dominance of the Conference meant that the conference was practically deadlocked after 1914, and it dissolved in 1938.

The two remaining European survivors were the Commissions for control of navigation on the Danube and Rhine rivers. Designed to keep open the European waterways to trade, both organizations were geopolitically highly significant. Importantly, both were founded many decades (or, in the case of the Rhine Commission, a full century) before the 'great war', and both had high levels of organizational autonomy, possessing strong mechanisms for influencing state behavior. For example, the Danube Commission had powers to borrow money on private markets, and maintained an independent treasury by collecting dues from ships. It also issued regulations with binding effect without direct approval by member states. Similarly, the Rhine Commission issued detailed regulations for navigation on the Rhine, which were transposed into national law by member states. Both commissions maintained their own vessels and undertook large scale projects to keep the rivers open, clean and navigable. In short, they provided crucial services that could not be easily replaced. Given the strong interest of governments in defending national shipping interests, the river commissions were integral parts of earlier geopolitical settlements (The Vienna Peace Treaty of 1815, and the Paris Peace Treaty of 1856). With the end of World War I both commissions now became part of the new Versailles system. To reflect the new geopolitical reality, Russia, Austria, Germany and Turkey were ousted from the Danube Commission. The Rhine Commission's headquarters were moved from Mannheim to Strasbourg, and France (which had lost its status as a riparian state in 1870–71) was readmitted together with Belgium, Italy and Britain. Ultimately, then, membership was fundamentally refashioned to reflect a new distribution of power and interests. It seems plausible, however, that the considerable authority and practical expertise vested in the river commissions played a large part in enabling them to survive as organizational entities rather than being dissolved to make way for new cooperative arrangements.

3 Discussion of findings

My empirical analysis of IGO mortality in Part 2 generates important insights into the ecology of the global IGO population since 1815. In line with general

theoretical expectations, I find that IGO terminations increase during periods of geopolitical instability. However, many IGOs survive periods of geopolitical turmoil—even in regions at the epicenter of conflict such as Europe during World War I. And others buckle during periods of seeming geopolitical tranquility. The challenge is therefore to explain why—given a specific systemic shock—some IGOs falter while others endure.

One possible answer suggested by my empirical analysis is that some IGOs survive exogenous shocks because they are, by design, stronger or more adaptable. Rationalist scholars often classify international organizations in terms of institutional design features, such as ‘Number’, ‘Membership’, and ‘Flexibility’ (Koremenos et al. 2001). From a rationalist perspective, such attributes are dictated by the specific nature of the underlying cooperation problem(s) an international organization seeks to address. Some problems demand cooperation among many different countries, while others only require cooperation among a few interested parties, etc. However, institutional design attributes may also be viewed as independent variables influencing organizational robustness. For example, my analysis indicates that having a large, global membership increases organizational survivability.

This finding is theoretically noteworthy. Early research on international cooperation portrayed small group size as a precondition for successful collective action (Axelrod 1984; Grieco 1988:506). Subsequent studies have similarly found that small, homogeneous groups of states face fewer obstacles to cooperation (Lipson 1991; Kahler 1992; Pahre 1994:327; Koremenos et al. 2001; Eilstrup-Sangiovanni 2009). Conversely, my findings suggest that, when it comes to organizational *endurance* (rather than ease of collective action *per se*), a large and diverse membership may be a boon.

There are two possible theoretical interpretations of this finding. One is that large Number correlates with greater bureaucratic resources. All else equal, IGOs with more member states are likely to have larger budgets and staff, and to enjoy greater access to international decision-makers, scientific experts and other organizational resources which may help to offset temporary deprivation. Large organizations are also likely to have greater resources for experimentation and innovation, which may increase their ability to adapt to crises by altering their practices.

A second interpretation is that large IGOs with global span are helped not so much by their size as by having a *heterogeneous* membership. Organizational ecology studies based in sociology and business economics have found that large, global businesses that operate across several markets have significantly greater longevity than geographically concentrated firms. The reason, they argue, is that global businesses can diversify portfolios and spread risks across several markets (Ranger-Moore 1997, 904–5; Baum and Shipilov 2006). A similar logic may explain why having a global (as opposed to regional) membership-base increases an IGO’s survival chances. By definition, global IGOs conduct their activities across multiple regions, and provide services to different categories of member states. They thereby face greater opportunities for diversifying activities and appealing to different constituencies. In times of crisis, IGOs with global membership are therefore more likely to remain relevant to at least a subset of their patrons. This logic is straightforwardly intuitive: a regional economic crisis may well kill off a regional Free Trade Agreement but is less likely to undermine a trade organization with global reach.

A small caveat is in order. If a heterogeneous membership protects IGOs against termination, it may seem counterintuitive that *intercontinental* IGOs have relatively high hazard-rates. However, this finding is readily explained by the specific form of membership and *type* of activities this category of IGOs tend to undertake. While 94 of 110 global IGOs in my dataset have *inclusive* membership, meaning they are in principle open to all states, the majority of intercontinental IGOs (119 of 121) have *exclusive* membership. Furthermore, many intercontinental IGOs take the form of restricted commodity organizations formed among producing countries to coordinate production and trade in specific products. Examples include the Inter-American Coffee Board (1940–48), the Intergovernmental Committee of Copper Exporting Countries (1968–97), the Union of Banana Exporting Countries (1974–96); the North Pacific Fur Seal Commission (1958–88) the Association of Iron Ore Exporting Countries (1975–98), and the Association of Tin Producing Countries (1983–2001). Since they focus on a single, narrowly defined and often geographically circumscribed task, such organizations are highly vulnerable to sector or region-specific shocks such as decreasing global demand for specific commodities.

In sum, both Number and Membership are significant for IGO survivability, insofar as having a large and heterogeneous membership reduces organizational failure-rates. Precisely *how* these features protect IGOs from dismantlement can be best explored through more detailed case studies. For example, future work might select a sub-set of the IGO population (say, free-trade organizations) and explore whether a wide membership carries distinct benefits in terms of enabling organizations to weather economic crises.

Another distinct finding from my analysis is that *mandate* matters for organizational survivability. IGOs focused on technical/scientific issues are significantly less prone to termination than organizations focused on security or economic cooperation. Again, this finding is relatively intuitive. IGOs focused on security (and to a lesser degree economic cooperation) often focus on ‘high-stake’ issues which are subject to political conflict and may require frequent re-negotiation. By contrast, technical IGOs focus on issues of low political salience and with clear welfare enhancing benefits. These are precisely the sorts of problems which classical functionalists like Mitrany (1975) expected to be most amenable to lasting international cooperation. Given their practical utility to states, technical IGOs are not only less likely to die, but when they do succumb, they tend to do so through succession or merger, meaning that cooperation is often continued in practice under oversight of a new organization.

Turning lastly to the effects of age, I have found that older IGOs have lower hazard-rates. This finding may seem surprising. One might expect older IGOs to be more inert and archaic, lessening their survival chances. Nonetheless, existing theories of international cooperation can be used to identify several possible benefits of organizational aging. First, from a narrow rationalist perspective, age is likely to be associated with greater accumulated expertise and better adapted practices, implying that older IGOs tend to produce greater benefits for states. Second, the longer an IGO has been around, the greater the probability that stakeholders at both the domestic and international level will have invested in institution-specific knowledge and/or made other asset-specific investments (such as adapting their own practices and routines) which lead them to favor its perpetuation. Age may thus be a good proxy for dynamics of institutional path-dependence highlighted by many institutionalist theories. Third, from a sociological viewpoint, age may be a good proxy for

‘environmental embeddedness’. Newly created organizations often lack stable social roles and routines, broad public endorsement, or secure exchange relationships (Baum 1989; Baum and Shipilov 2006; Ranger-Moore 1997:904–9). At the same time, new organizations may lack the legitimacy and recognition that long service confers on incumbent organizations (Baum and Shipilov 2006; Hannan and Freeman 1984). Thus, from the perspective of extant theory, a combination of high sunk costs, accumulated expertise and a proven track-record may have helped the Danube and Rhine River Commissions along with many of the technical IGOs founded during the nineteenth century to survive World War I.

An alternative (but compatible) interpretation of the relationship between organizational age and survival is that age is an indicator of rank or ‘pioneer’ status. Theories of business organization posit that the first firms to enter a new market are likely to establish a leading position through monopolizing vital resources, and by shaping consumer preferences while competition is still low (Astley 1985:266). A similar dynamic may apply to IGOs. The first IGOs to facilitate cooperation on a given issue may gain a lasting advantage by establishing control over crucial resources (such as state funding or technical expertise) and by defining relevant norms or standards to which later entrants must conform if they wish to work on the same issue(s). Once cooperating within a framework of rules, norms and standards formulated by incumbent IGOs, states may develop high ‘switching costs’ which make it hard for newcomers to establish themselves as viable competitors. Such first-comer advantages may explain why many technical IGOs formed during the nineteenth century survive to this day. Having formulated the basic rules and standards governing cooperation in their areas, and ‘socialized’ states into specific modes of cooperation, these pioneering organizations may have effectively impeded the rise of viable organizational competitors.

3.1 High organizational turn-over, but a stable core

The analysis in Part 2 shows that large Number, wide geographic span, and advanced age increase IGO robustness. Additionally, IGOs serving technical or scientific functions are more robust than other types. To be sure, these factors may be partly interrelated; with higher age comes more members (and thus wider geographic span). Nevertheless, each factor asserts an independent, positive effect on IGO survivability in the PH model. A good way to think of these features is thus as ‘probability raisers’ (Mahoney 2008:7, 13)³⁴; none of these factors appear either necessary or sufficient to ensure the survival of an IGO, but individually and in combination they enhance its overall resilience.

Combined these findings describe a global IGO system in which positive feedback and institutional lock-in dominates, so younger and smaller IGOs are at higher risk of death, while increasing age and size reduce failure-rates, allowing established IGOs to grow yet older and larger.³⁵ Much like economic

³⁴ Each causal variable here wields its own effect, and each variable can potentially compensate for any other, so that different combinations of variables may lead to the same outcome (see Mahoney 2008:7, 13). This suggests there may be several ‘causal pathways’ to IGO death.

³⁵ These contrasting views of the IGO system draw closely on Ranger-Moore’s (1997:904) discussion of two contrasting views of the world of firms.

markets dominated by firms (see Ranger-Moore 1997:904), such a system is likely to grant clear advantages to ‘first-comers’ that can exploit low initial rates of competition in a given area to establish a dominant position from which they can continue to expand. Theoretically, this system is thus likely to feature a relatively stable core of long-established IGOs, combined with frequent entry and exit of new organizations on the margins.

This picture contrasts sharply to what we might describe as a ‘perfectly competitive’ IGO marketplace. In a perfectly competitive market, changing market conditions combined with high costs of institutional reform would likely cause older and larger IGOs to gradually succumb to growing organizational inertia and historical anachronism. Rather than displaying a stable core of long-established institutions, such a system would likely be characterized by constant institutional turnover, as older and less flexible IGOs were abolished and replaced by newcomers better fit-for-purpose. As my analysis has shown, the global IGO-system since 1815 most closely resembles the former kind of system.

4 Conclusions and future research

It is a common view in international relations scholarship that IGOs are robust creations that only rarely disappear. Thus, according to one widely cited study, international organizations “often produce undesirable and even self-defeating outcomes repeatedly, without punishment much less dismantlement” (Barnett and Finnemore 1999:701). The reality, however, looks different. While individual IGOs have proven remarkably robust, more than one-third of IGOs created since 1815 have since disappeared—many within a few decades of being founded.

By itself this finding does not definitively recommend rejection of existing theories of institutional robustness. What it shows, rather, is that such theories need to be tested and refined in light of a wider array of cases. The aim of this article has been to bring such cases to light, and to provide some preliminary hypotheses that might explain striking empirical regularities in the life-cycles and relative robustness of IGOs. My analysis demonstrates that focusing on factors commonly held by existing theoretical accounts to shape institutionalized cooperation can help us make sense of general patterns of organizational death/survival. In some respects, my findings thus confirm received wisdom. This is true, for example, with respect to the correlation between geopolitical conflict and IGO disappearance, and with respect to the relative robustness of technical IGOs compared to other types. In other respects, however, my analysis challenges or invites refinement of existing theory. This is true, for example, with respect to the beneficial effects of large Number for lasting cooperation.

Ultimately, whilst individual results presented in this article can be interpreted as supporting realist, institutionalist or constructivist arguments, collectively my findings challenge leading accounts of international organizations. IGOs are not in the main as robust as one would expect if they were subject to significant ‘increasing returns’, institutional ‘lock-in’ or pervasive path-dependence, or if they fundamentally transformed the preferences of states through socialization. Neither, though, do they appear as fragile and ephemeral as many realists assume.

4.1 Avenues for future research

The present study points to several avenues for future research. First, important questions arise from the large number of institutional successions documented. As discussed in Part 1, a large swathe of institutionalist literature cites high costs of institution-building and increasing returns to cooperation as weighty reasons why states prefer to reshape or reform existing institutions rather than accept the costs and uncertainties associated with creating new ones (Keohane 1984:102; Abbott et al. 2016; Kahler 2009; Johnson and Urpelainen 2012). Some scholars go even further, suggesting that “paths of action taken by actors or institutions can be virtually impossible to reverse” (Pierson 2000:251). Against such expectations, my analysis shows that states have repeatedly chosen to dismantle existing institutions and to start over from scratch - negotiating new rules of cooperation and creating new organizations to oversee their implementation. This does not imply that institutional theories based on path-dependence or institutional lock-on are wrong, merely that they may be overstating the strength of the forces preventing existing institutions from being replaced. Furthermore, my analysis suggests that the scope conditions of such theories need to be more sharply defined. Institutional path-dependence does not necessarily imply IGO endurance. Presumably, path-dependent processes may occasionally lead to dead-ends, as barriers to institutional reform mean that international organizations fail to adapt to exogenous change.³⁶ The conditions under which specific dynamics of path-dependence may hinder IGO dismissal thus need more careful specification. A promising place to start would be to study more closely the many historical cases of institutional succession identified in this article. Under what conditions have states chosen to replace extant IGOs? Considering that institutional successions involve significant changes to either an IGO’s membership, mandate or decision-rules, a plausible hypothesis might be that successions provide a means to escape ‘joint decision traps’ (Pierson 1996) due to which disobliging members may prevent desired institutional reforms. Another theoretic possibility is that institutional successions represent instances of re-contracting between state ‘principals’ and IGO ‘agents’, perhaps in order to reduce agent slack. Such hypotheses can be best explored through more detailed post-mortem case-studies, which would allow us to pose what Gryniviski (2013) calls ‘contrastive why questions’. ‘Why succession rather than institutional reform?’ Exploring this question in a historical context may cast new theoretical and empirical light on processes of institutional change.

Another topic for future research concerns the role of organizational agency. A population-oriented approach to organizational change such as the one adopted here focuses on explaining macro-level changes in the number and types of IGOs but does not consider questions of individual organizational adaptation. Macro-level changes are understood to occur, not through organizational-level adaptation, but through a process of ‘competitive selection’ whereby an environment rewards certain traits and punishes others (see Hannan and Freeman 1977; Halpin and Jordan 2009). This downplays the importance of individual agency whereby IGO actors react to environmental stimuli and seek to refashion themselves to avoid

³⁶ I thank Bob Keohane for emphasizing this point.

obsolescence (see Johnson 2013; Abbott et al. 2016). A more actor-centric approach might instead consider how an IGO's capacity for autonomous action affects its survival chances. For example, Gray (2018) shows that the vitality of international trade organizations hinges on the quality of their bureaucracy and the ability of secretariats to enact policy autonomously. Examining the role of autonomous agency by IGO bureaucracies is beyond the scope of this article. However, the findings presented here may serve as a starting-point for a case-study based analysis of strategic adaptation by IGOs—for example by pointing to 'outlier' cases in which agent-driven adaptation may have played a decisive role in ensuring survival.

A third avenue for future research concerns possible variation in the determinants of IGO survivability across time. Unlike previous studies of IGO vitality (Gray 2018) or permanency (Shanks et al. 1996), the present study analyzes the entire population of IGOs created since 1815. This is both a strength and a weakness. The benefit of a broad historical approach is that it yields more observations, thus lending greater confidence to statistical findings. On the other hand, by analyzing patterns of IGO death/survival across two centuries, I implicitly presuppose that the determinants of IGO survivability remain relatively constant over time. This may not be the case. After all, the global IGO population has undergone profound changes since 1815. Crucially, there has been a significant increase in the total number of IGOs, combined with the emergence of new kinds of international organizations, such as transgovernmental organizations, public-private partnerships, and private transnational regulatory bodies (Abbott et al. 2016). Such changes may trigger new processes of ecological change. Specifically, growing numbers of organizations with a similar focus and overlapping membership are likely to lead to a more competitive environment, as growing 'institutional density' (or what some International Relations scholars refer to as 'regime complexity') intensifies competition for resources (Abbott et al. 2016; Hannan and Freeman 1989:132–33). In such an environment, some IGOs may dissolve, not due to specific environmental shocks, but rather because the existence of other organizations with similar purpose and membership means they lose out on vital resources including access to expertise and state funding. This might explain the high mortality-rates at the beginning of the twenty-first century, a period of relative geopolitical stability. Whether the determinants of IGO mortality vary across time is a question for future research which might be explored by dividing the general IGO population into separate historical sub-populations and examining patterns of mortality/survivability for each in turn.

An important aim of this study has been to demonstrate that the historical population of defunct IGOs constitutes a rich (but relatively untapped) source of empirical data against which theoretical expectations regarding the robustness and effectiveness of IGOs can be evaluated and refined. Future research should derive explicit hypotheses regarding the death/survival of different forms of IGOs and code relevant aspects of the population to enable systematic hypothesis testing. Although it has been beyond the scope of this article to test any specific theory of IGO death/survival, I hope to have indicated the kinds of questions that a rigorous social scientific research agenda on IGO ecology could seek to answer, using a combination of statistical analysis and qualitative research, including more detailed post-mortem case studies of deceased IGOs.

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