The G20, climate change and COVID-19: critical juncture or critical wound?

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Abstract

Purpose – The Group of 20 (G20) is tasked with responding to economic shocks in the global financial system, with COVID-19 having proved to be the most significant shock since the G20's inception. COVID-19 also represents the first economic crisis accompanied by a concerted attempt to "build back better", principally through a climate-compatible recovery. In 2021, there is little clarity as to the G20's response to this challenge, primarily due to considerable divergence in the green stimulus practices of its member states. The paper aims to investigate whether the G20, climate change and COVID-19 are critical juncture or critical wound.

Design/methodology/approach – Historical institutionalism (HI) suggests that one can explain an institution's future response by reference to its developmental pathway to date. This contribution adopts its concept of "critical junctures" to shed light on the G20's possible institutional response to COVID-19. The contribution undertakes a comparative analysis of the global financial crisis (GFC) and COVID-19 as possible critical junctures for the G20.

Findings – In doing so, the work demonstrates that the G20 "building back better" from COVID-19 requires a shift away from its institutional orthodoxy to a much larger degree than its response to the GFC. Accordingly, whilst both the GFC and COVID-19 may be considered critical junctures for the G20, only COVID-19 has the potential to be a "critical wound" that leads to institutional redundancy.

Research limitations/implications – Through interrogating this further, this exposition prospectively outlines two possible futures the G20 faces as a consequence of COVID-19: reform or redundancy. In this way, it offers an *ex ante* perspective on policy-reform options for the G20's ongoing response to COVID-19.

Practical implications – Whichever choice the G20 makes in its response to COVID-19 has profound consequences for global governance in an increasingly unpredictable world.

Originality/value – Herein lies the importance of an exploratory assessment of COVID-19 as a critical juncture or a critical wound for the G20.

Keywords Climate change, Historical institutionalism, Global governance, COVID-19, G20, Green recovery

Paper type Research paper

The Group of 20 (G20) is tasked with responding to economic shocks in the global financial system, with COVID-19 having proved the most significant shock since the G20's inception. COVID-19 also represents the first economic crisis accompanied by a concerted attempt to "build back better", principally through a climate-compatible recovery. In 2021, there is little clarity as to the G20's response to this challenge, primarily due to considerable divergence in the green stimulus practice of its member states. HI suggests that one can explain an institution's future response by reference to its developmental pathway to date. This contribution adopts its concept of "critical junctures" to shed light on the G20's possible

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institutional response to COVID-19. It undertakes a comparative analysis of the GFC and COVID-19 as possible critical junctures for the G20. In doing so, it demonstrates that the G20 "building back better" from COVID-19 requires a shift away from its institutional orthodoxy to a much larger degree than its response to the GFC. Accordingly, whilst both the GFC and COVID-19 may be considered critical junctures for the G20, only COVID-19 has the potential to be a "critical wound", which leads to institutional redundancy. Through interrogating this further, this exposition prospectively outlines two possible futures the G20 faces as a consequence of COVID-19: reform or redundancy. In this way, it offers an *ex ante* perspective on policy reform options for the G20's continued response to COVID-19. Whichever choice the G20 makes in its ongoing response to COVID-19 has profound consequences for global governance in an increasingly unpredictable world. Herein lies the importance of an exploratory assessment of COVID-19 as a critical juncture or critical wound for the G20.

1. Introduction

The G20 emerged in 1999 out of a need to respond to the global economic shocks brought by globalisation. It describes itself as the "premier forum for international economic cooperation" (G20, 2020a). Nevertheless, the success of the G20's response to past economic shocks is contested (Vestergaard & Wade, 2012). However, for each shock, the G20's finance track met and coordinated a plan that sought to mitigate the immediate economic aftermath and remedy structural defects in the global economic system to ensure protection against future shocks. The later introduction of a sherpa track, formed by government delegates known as "sherpas" who focus on various non-financial topics relevant to the G20, further stimulated the G20's aspirations beyond its original purview as a fiscal stabiliser. Several of these areas, including climate change and energy, are inherently connected to current calls to "build back better" from COVID-19. "Building back better" is a way to address the two current crises the world faces in COVID-19 and climate change, principally through strategic climate-compatible financial stimulus and investment (Levy, 2020). As the source of over 75% of greenhouse gas emissions, 80% of global gross domestic product (GDP) and two thirds of the globe's population – the G20 has an key role to play in building back better (Climate Analytics and World Resources Institute, 2021). This is reflected in current calls for its members to develop principles on a green recovery from COVID-19 and to individually and collectively fund and implement and one (Obergassel, Hermwille & Oberthür, 2020: 7). In its short-term response to COVID-19, the G20 has not taken up this call to action. Yet, November 2020 saw the G20 iterate its commitment to "leading the world in shaping a strong, sustainable, balanced and inclusive post-COVID-19 era" (G20, 2020b). Therefore, it remains an open question as to whether the G20 will "build back better" from COVID-19 in the medium to long-term; a decision which will have longstanding ramifications in terms of the likelihood of the world achieving the temperature goals of the Paris Agreement (Climate Analytics and World Resources Institute, 2021).

HI's concept of "critical junctures" can be used to theorise the G20's institutional choice as to whether or not it will "build back better" in response to COVID-19. HI seeks to understand institutions as agents of normative change within their historical and cultural context (Steinmo, 2008). Traditionally under HI, institutional pathways can be understood as a "punctuated equilibrium". It is critical junctures, exogenous phenomena that interrupt extended periods of institutional stability, which punctuate stable institutional equilibria (Capoccia & Kelemen, 2007). To advance critical juncture analysis in contemporary global governance, this paper further introduces the concept of "critical wound". It posits that an institution can suffer a critical wound if it fails to adequately innovate in response to a critical juncture. To determine whether COVID-19 is a critical juncture for the G20 and what the implications of this may be in terms of its potential to be a critical wound, this contribution undertakes a comparative analysis of the GFC and COVID-19. Using this insight, it prospectively outlines possible mechanisms of production and legacy effects for the G20 concerning its institutional response to the challenge of "building back better".

This paper is structured as follows. Part Two provides a background on the evolution of the G20. Part Three provides an overview of HI and its theory of critical junctures, including identifying the hallmarks and consequences of them for international institutions. Using this framework, Part Four assesses the extent to which the GFC and COVID-19 can be considered critical junctures for the G20. Part Five then offers a normative exposition of what COVID-19 could mean for the future of the G20. It describes how the G20 could employ the full breadth of its thematic coverage to ensure a green recovery from COVID-19. Alternatively, it outlines how the G20 may risk institutional redundancy if surpassed in this task by other global governance groupings. This article thus provides an overview of the G20's current institutional choices and their future implications for the global governance ecosystem, including, crucially whether COVID-19 could amount to a "critical wound" or "critical juncture".

2. Background of the G20

The G20 is a grouping of 19 countries plus the European Union that spans continents, geographies and organisation for co-operation and economic development (OECD) status. Its membership comprises of the "G7" – the United Kingdom, the USA, Japan, Germany, France, Italy and Canada. Also, G20 members are Argentina, Australia, Brazil, China, India, Indonesia, South Korea, Mexico, Russia, Saudi Arabia, South Africa and Turkey. Despite the range of countries that make up its membership, many see the G20 as a "closed club" of economically prosperous nations (Subacchi & Pickford, 2011). This is particularly so as its admission processes remain murky and operate subject to a high degree of politicisation. The G20 as an institution thus provides a window, albeit a selective one, into the political coordination of the world's largest economies. Notwithstanding its exclusivity, the ramifications of the G20's operation spans much further than its membership. As a collective, the G20 represents three-quarters of international trade (OECD, 2020). However, its status as a pre-eminent forum for global economic harmonisation could be at threat, as its members hold increasingly divergent views about the G20's role in "building back better" from COVID-19. In order to assess the current position of the G20, it is necessary to understand its institutional evolution and response to climate change and the broader challenge of "building back better" from COVID-19.

2.1 The genesis of the G20

The G20's began as a "first-responder" to global economic crises, a role which over time has expansively evolved as it sought to be instead a "steering committee" for the global economy (Cooper, 2010). Throughout the G20's history, economic crises and intermediary periods of resilience planning have been crucial to its institutional development. By exploring these aspects, it becomes possible to distinguish the G20's critical junctures and their implications for the broader global governance ecosystem.

The roots of the G20 as an institution stretch back to the various Bretton Woods Institutions set up post-World War Two (G20, 2008). These institutions were formed to foster international collaboration on crucial issues as a means of avoiding the heavy tolls of war and political hostility that many countries had suffered in the first part of the 20th century. Fundamentally, the premise of these post-war institutions was that global cooperation led to better outcomes. With the emergence of the cold war, plurilateral partnerships also emerged in the Eastern and Western Blocs. Such blocs formed for both practical consequences, such as defence, but equally had broader normative aspirations and political ideologies in mind. With the dissolution of the Cold War, a new era of international trade came to fruition. Barriers to international trade dropped, and trade volumes began to skyrocket accordingly. As the world economy became increasingly linked by trade, states had an even more significant stake in ensuring the stability of global economic affairs. These elements intertwine in the conception of the G20 as a global pact whose members have a common purpose of maintaining the stability of the international economy.

The G20 sprung to life in 1997 in response to the Asian Financial Crisis (AFC). Finance Ministers and Central Bank Governors conceived the G20 as a forum to discuss global economic stability and growth in the face of crises. In this way, at the G20's inception, it performed a similar function to its institutional predecessors in the G7 and G8. This being the familiar "Concert of Europe" approach whereby an exclusive grouping of powerful states works to regulate the system of all states through informal face-to-face meetings (Kirton, 1989). The G20's formation in response to the AFC yielded results in several ways. G20 members strengthened their financial compliance codes and adopted voluntary standards relating to sovereign debt. Soon after the AFC, the G20 expanded its remit from crisis response to tackling cross-cutting issues affecting the global economy, ranging from restricting financing of terrorism to planning for an ageing population. By 2008, the G20 had responded to a financial crisis and had begun to coordinate policy on more issues adjacent to the global economy. Notwithstanding this, the G20 remained but one institution in an increasingly crowded global governance ecosystem.

In 2008, the status of the G20 was elevated to high-level forum, as it emerged as the primary crisis management "team" called in to respond to the GFC. During the GFC, G20 members quickly realised that the economic harmonisation they had enjoyed in the earlier part of the 21st century was facilitated by a haphazard trans-national financial sector that had long gone under-regulated. This both highlighted the frailty of the global financial system to shocks and shone a light on the need for cohesive global regulation. In response to the GFC, the G20 agreed to elevate its operations to include its members' heads of state and governments, with the view that only through enhanced high-level governance could a global depression be averted (Triggs, 2018). The now high-level G20 did indeed pursue a collective response to the GFC. It issued an unprecedented $US5 trillion of concerted expansionary fiscal measures (Bradford & Linn, 2012). Importantly, this action was taken in tandem with longer-term policy cooperation to address the underlying causes of the GFC, including imbalances in G20 members' trade balances, current accounts, private and public debt and savings (Triggs, 2018). Ultimately, the GFC proved a pivotal stepping stone in the G20's institutional development. The GFC solidified the G20's status as the pre-eminent global economic forum and demonstrated its effectiveness at implementing coordinated solutions to common economic issues (Jager, Westphal & Park, 2020).

Just over a decade of the G20's existence from 1997–2009 had seen it evolve from an informal meeting of mostly finance ministers to a powerful grouping that sought to plan for and tackle global economic crises. Following the introduction of the G20's unique "troika" system in which the outgoing and incoming presidency assist the sitting president in setting the agenda for a session, the next decade saw the G20 expand its thematic coverage even further. Initially, this was quite surprising, as the G20 did not possess the institutional hallmarks of other global governance bodies, such as a permanent secretariat. However, the G20's informal nature proved to be essential in its success at facilitating conversations on the financial interests of the most economically powerful states. The G20's flexible yet broad approach to both crisis prevention and resiliency based strengthening was later considered a reason that the later European Financial Crisis remained regionally localised and that the years preceding 2020 were mainly ones of macro-economic stability and growth (Kirton, 2020). These factors contributed to the G20's finance track being a prime source of economic diplomacy in the 21st century.

After the GFC, the G20 expanded its thematic coverage by adding a sherpa track alongside its financial one. The G20's sherpa track hosts regular meetings amongst "sherpas" or diplomats from each G20 member state and the minister relevant to a given finance adjacent theme. In 2021, sherpa track working groups include health, education, employment, culture, development, trade and investment, tourism, energy transitions and climate stewardship, the environment, anti-corruption and agriculture. Despite the G20's work agenda expanding since the introduction of the sherpa track, the time available to discuss many of its themes at G20 summits did not expand in tandem (Kirton, 2020). For this reason, advancements in some sherpa tracks, such as labour rights, were often at the expense of those that relate to the greening of the economy (Kirton, 2020). As a result, despite the G20's success in demonstrating its economic prowess in the face of financial crises, its broader efforts to ensure the sustainability of the global economic order through its sherpa track have been mixed.

The G20's current eminence stems from it being a forum where free and frank discussion can be held on macro-economic issues. This function is bolstered by two advantages in contrast to other groupings. First, the G20 brought in key states missing from earlier Bretton Woods, G7 and G8 forums, such as BRIC countries whose economies were rapidly developing at the G20's inception. Second, the G20's more global reach reflected its potential as a stabilising force for the global economy, primarily through facilitating macroeconomic policy coherence and coordination. By recognising the importance of improving economic resiliency in the ensuing years between economic crises, the G20 expanded their remit to issues adjacent to the global financial system. Thus, whilst the G20's institutional path demonstrates that it has retained an initial focus on responding to macro-economic crises, its sherpa track provides insight into the broader normative potential that the G20 possesses. Given its institutional pathway to date, the extent to which the G20 will extend its institutional firepower in response to COVID-19 remains up for debate. In no area is this more pressing than its response to climate change.

2.2 The G20 and climate change

Climate change presents one of the biggest threats to both the world economy and the people it serves. Unsurprisingly, therefore, it has been on the G20's agenda since its first high-level meeting in 2008. Since then, the G20 has underpinned the importance of tackling climate change in each year's communiqué. Despite the G20 being comparatively early in identifying climate change as an economic risk it sought to resolve, the G20 mostly did not turn this rhetoric into action. As a result, the United Nations Environmental Program (UNEP) reports that nearly all G20 members are off track to meet their emissions reduction targets despite G20 members all possessing the technological and financial capacity to do so (UNEP, 2019). This governance gap reflects the fact that G20 members recognise the importance of addressing climate change but often do not take the necessary action.

To understand the institutional importance of the G20's governance gap regarding climate change, it is necessary to consider the unique position it is in to tackle climate change and the approach it has thus far employed to do so. The G20 has proven itself a constructive forum for international dialogue and represents a mix of states necessary for effective climate diplomacy. G20 members also cumulatively bear the most historical and projected responsibility for greenhouse gas emissions (UNEP, 2019). Moreover, the latest analysis suggests that net-zero pledges by all G20 states is *the* major determinant in the world meeting the Paris Agreement's maximum temperature limit of 2 degrees and is the only action that brings the world within reach of 1.5 degrees (Climate Analytics and World Resources Institute, 2021). Also important is that the G20 facilitates meaningful exchange between both developed and developing states. Thus, it can help overcome the pitfall of multilateral UNFCCC negotiations, which have long fractured along similar lines. Given that the G20 has positioned itself as the "steering committee" of the global economy over the last decade, it has a comparative advantage to other institutions in overcoming the "tragedy of the commons" nature of tackling climate change.

The lynchpin of the G20's approach to tackling climate change has been its energy policy. At its 2009 Pittsburgh Summit, the G20 showed comparatively early interest and leadership in climate matters when it recognised the need to phase out inefficient fossil fuel subsidies (G20, 2009). As a hint towards further collective action, the G20 then agreed that each country would do a stocktake of its current subsidy structures as a first step to changing it. Although some states actioned a stocktake, this did not lead to any tangible change in the fossil fuels subsidies of G20 states. Instead, estimates now suggest that the G20's fossil fuel subsidies have amounted to a total of $US3.3 trillion since the signing of the Paris Agreement in 2015 (Bloomberg NEF, 2021). Consequently, the G20's progress in achieving fossil fuel subsidy reform is largely considered a failure (IISD, ODI & Oil Change International, 2020). Despite the G20 recognising the importance of mitigating and adapting to climate change, it has often failed to link this to its finance track discussions and, ultimately, the domestic policies of its member states. Understanding the G20's current approach to climate change issues helps providing the context for an informed assessment on whether it will seek to "build back better" in response to COVID-19.

2.3 The G20 in the context of "building back better" post-COVID-19

"Building back better" from COVID-19 is as much an economic transformation as it is an environmental one. The United Nation's General Assembly COVID-19 Omnibus Resolution describes "building back better" as *inter-alia* a "climate-responsive approach to economic recovery". The G20 faces a normative decision about whether it will adopt this focus in its COVID-19 recovery efforts. However, COVID-19 does not present the first opportunity for the G20 to implement a climate-friendly economic recovery. In fact, in response to the GFC, most of the $US520bn green stimuli out of the total $US3.25 trillion package was spent by G20 states (Jager *et al.*, 2020). Through the combination of its financial and sherpa tracks, the G20 is well placed to build on this legacy in response to COVID-19 particularly by coordinating policy action in the nexus between the economy, climate change and sustainable development (G20, 2020b; G20, 2016). That said, recent developments present a mixed picture as to the institutional willingness of the G20 to "build back better".

The G20 is not alone in being faced with the challenge of "building back better" to COVID-19, yet early indications are that it appears to be falling behind its contemporaries in doing so. Allegations that the G20 has been "absent without leave (AWOL) in the recovery from COVID-19 began soon after the onset of the pandemic (Brown, 2020). As the COVID-19 recovery phase began in different parts of the world, concern shifted to how the G20 was going to ensure resiliency of the global economic system against current and future shocks. For example, how the G20 as an institution can help drive a more equitable vaccine distribution to protect against a resurgence of COVID-19. G20 leadership has thus far been lacking regarding concrete plans to improve the wider resiliency of the economic system by "building back better" from COVID-19. Similarly, the troika system was designed to ensure that the G20's agenda would not be subject to interest capture, yet this may be a reason for the dearth of G20 leadership in the global recovery from COVID-19. Representative of the risk of interest capture was Saudi Arabia's 2020 presidency and concurrent status as the most significant oil exporter in the G20. Reflecting this, the G20's 2020 agenda involved discussing a "circular carbon economy" rather than a concerted move away from fossil fuels – a fundamental tenet of "building back better". Such messaging was also echoed in the final communiqué and resulted in energy transitions being treated as largely inane at the 2020 G20

Summit (G20, 2020a). The lack of a commitment by the G20 to "building back better" by way of a green recovery in the short-term response to COVID-19 can be contrasted to the clearer support for a green recovery shown by the G7 and OECD (G7 Leaders, 2021; OECD, 2021). Whilst the G20's slow start does not necessarily preclude action on a green recovery to COVID-19, it may reflect an institutional reluctance to "build back better".

In 2021, under the G20 presidency of Italy, there has been a greater emphasis on "building back better" by way of a green recovery to COVID-19. Crucially, however, this is yet to surpass the level of commitment to one that the G20's rival governance groupings have expressed (OECD, 2021; G7 Leaders, 2021). Whilst the G20's response will continue to emerge, it undoubtedly has implications for the wider network of global economic governance. To understand these and other effects of COVID-19, it is necessary to consider whether it could be a critical juncture for the G20. To do so, one must consider the hallmarks of a critical juncture and whether the G20 has faced one previously in its last major crisis it faced in the GFC.

3. Distinguishing a critical juncture

Institutions are not static, and as such, the G20's origin in economic crisis management does not explain its full form today (Pierson, 2000). Instead, events help shape the G20's internal and external institutional development. Analysing these events helps providing insight into the trajectory of the G20 – including how it may respond to current and future shocks. HI offers a framework that does this. This section introduces critical junctures, their elements and how they can uniquely be applied to international organisations.

3.1 Critical juncture theory

Critical junctures are a major tool of the HI toolbox, alongside path dependency and punctuated equilibria. They are defined by Capoccia & Kelemen (2007) as phenomena that interrupt extended periods of institutional stability. Critical junctures often occur at the most opportune moments in an institution's history, bringing with them clear windows of opportunity for institutional innovation (Cortell & Peterson, 1999; Capoccia & Kelemen, 2007). Historically, they are often viewed as "turning points" in an institution's development (Viola, 2019). What makes a juncture "critical" is its potential to increase returns to an organisation (Pierson, 2000), thereby making consequences of the institution's decision are potentially momentous (Capoccia & Kelemen, 2007). Increasing returns is an epistemology borrowed from economics that describes positive feedback mechanisms that reinforce that which gains success or aggravate that which suffers a loss (Arthur, 1996). This potential remains only that, as an institution has many development paths available to it at a critical juncture (Capoccia & Kelemen, 2007). In this way, critical junctures remake institutional parameters by "shaping what is politically possible, even conceivable" (Thelen, 2002). This means, unlike path dependency, critical junctures are associated with generating instability over equilibrium (Pierson, 2000). Accordingly, they may "shake institutional foundations to the core", thereby opening them up to new possibilities (Thelen, 2002).

3.2 Application to international institutions

Critical juncture theory has been applied across the spectrum of institutional settings yet holds particular value in understanding international institutions. HI approaches underscore the importance of international institutions as vehicles through which social interactions are shaped, constrained and driven in international relations (Viola, 2019). A critical juncture framework is especially conducive to analysing "informal" international institutions that typically fall beyond the purview of conventional theories of international relations. This makes it well equipped to examine a "club" based institution, such as the G20. The loose structure and varied membership of "club" based institutions means that they may not be explicitly driven by a coherent normative agenda or consensus amongst their members (Viola, 2019). These aspects can result in a "governance gap" in international institutions whereby there is a long-term discrepancy between the action required and the action taken in a given issue area (Fioretos, 2011). In club-based institution, it may be that "the individual interests of multiple states may paradoxically be to their collective detriment in the future, even as crises loom larger" (Fioretos, 2011). Understanding this possibility is crucial in theorising an institution's possible response to a critical juncture. However, such effects are not limited to the international institutions themselves. Critical juncture theory also recognises the broader influence of institutions in the networks they form part of (Thelen, 2002). In the network of global governance actors, the G20 faces competition from alternate groupings such as the G7, OECD and BRICS (Brazil, Russia, India, China and South Africa). Failure by the G20 to address perceived governance gaps could result in its position being challenged by this wider field of action. In these ways, critical juncture analysis can yield additional insights into the change and stability of international institutions and the networks it belongs to.

3.3 Key elements

Given the value of critical juncture analysis for international institutions, it is necessary to understand the key elements they possess. Whilst not all elements may be equally applicable to a specific situation, they offer an essential framework to guide critical juncture analysis. As such, they help distinguish critical junctures from more gradual forms of institutional change seen in HI, such as drift, layering and conversion (Rixen & Viola, 2016). Collier & Munck (2017) have outlined a robust framework for one, which this contribution tailors to international institutions as follows:

> Antecedent Conditions: These are the economic, political, or historical features that form the institutional backdrop for a given institution. These could include both founding conditions, as well as legacies of prior critical junctures (Collier & Munck, 2017). These conditions are what HI scholars use to distinguish different institutional reactions to the same critical juncture.
>
> Cleavage or Shock: The cleavage or shock is what drives a critical juncture. They are often extraneous to an institution. Less commonly though, they can also be driven by internal dynamics, such as power relations and coalitions (Viola, 2019).
>
> Critical Juncture: An institution faces a critical juncture in response to a shock if it has an opportunity for a major episode of institutional innovation. Conversely, if an institution is constrained and does not have choice over its response, it cannot be said to be facing a critical juncture.
>
> Mechanisms of Production: These are the specific means by which an institution responds to a critical juncture. These are reflective of self-reinforcing, self-undermining or reactive sequences (Viola, 2019).
>
> Institutional Legacy: An institutional legacy is formed by mechanisms of production that cause stickiness and consequently path dependency. Such legacies consequently form the antecedent conditions for an institution's next critical juncture.

Whilst the identification of critical junctures is often done retrospectively, there is increasing recognition of the value of exploratory analysis (Dupont *et al.*, 2020). In particular, it is useful in distinguishing between a gradual change and change brought about from a critical juncture and pre-emptively assessing the consequences of one. The critical juncture framework can also be used in a comparative sense to analyse either different institutions at a given time or one institution over time. The latter is particularly beneficial in distinguishing the implications of a critical juncture for a given institution, hence its application assess the G20 in this instance.

3.4 Implications of a critical juncture

Whilst external events are the primary cause of critical junctures, they only crystallise through the internal response of an institution. At a most basic level, an institution can choose to either persist or disband in the face of a critical juncture (Krasner, 1984). It could also face experience a "near miss" for institutional innovation due to insufficient actor mobilisation (Capoccia, 2015). If an institution persists, it may choose to depart from its internal norms when responding to an exogenous event However, due to an entrenched institutional culture, an institution deviating from its pathway may prove difficult. Entrenched or "sticky" institutions experience change too; but in a more gradual way, that does not fundamentally challenge the premise of the institution (Thelen, 2002). In other words, depending on whether an institution exhibits self-reinforcing, self-undermining or reactive sequences in response to a critical juncture, different effects occur (Viola, 2019). These effects may be set-up (i.e. voting structures), network (i.e. actor orchestration) or cognitive (i.e. decision-making) (Viola, 2019). For example, a self-reinforcing sequence could lock in increasing returns for an institution in the form of elevated actor orchestration powers within its network. Alternatively, a self-undermining sequence could result in set-up factors being weakened to the point that an institution can no longer function. This could have flow-on network effects as institutional competitors may seek to fill the vacuum left by an institution, in turn, leading to institutional erasure (Bell, 2011). In this way, a failure to innovate in response to a critical juncture can likewise mean it is also a "critical wound" for an institution.

4. A tale of two crises: the global financial crisis and COVID-19

This section applies critical juncture theory to the two major events the G20 has faced since its inception: the GFC and COVID-19. Analysing the response of the G20 to the GFC from its antecedent conditions to the legacy it generated helps providing an understanding of its status as a critical juncture for the G20. The insights gained from this analysis enables one to then contrast it with COVID-19 as a possible critical juncture for the G20. The comparative analysis of past and present critical juncture candidates for the G20, in turn, helps to hypothesise future implications of COVID-19 for the G20.

4.1 The global financial crises

4.1.1 Antecedent conditions. Before the GFC, the G20 had been operating as an informal grouping of central bank and finance ministers. After their response to the AFC, the G20's agenda grew significantly broader in scope, an aspect which is reflected by their broadened communiqués. Despite this normative expansion, the G20 did not implement many tangible policy responses in these finance adjacent areas in response to the AFC. Instead, the G20 demonstrated their function as a cohesive yet comparatively inert vehicle for global policy coordination. These conditions formed the antecedent conditions prior to the shock of the GFC.

4.1.2 Shock. With a small but significant share of the world's bank and capital being on the verge of collapse during the GFC, its shock for the world economy was and continues to remain evident. From an institutional perspective, the shock for the G20 was primarily a policy one. The GFC prompted questions about how G20 members could encourage states not to enact protectionist policies in response to the GFC and how the G20 could ensure better transnational regulation to ensure the root causes of the GFC could be addressed to prevent it happening again.

4.1.3 Critical juncture. The GFC presented a clear opportunity for institutional innovation for the *prima facie* G20, making it a critical juncture. Not only did member states choose which grouping it tasked with recovery to the GFC, but also equally what the character of this recovery could be (UNEP, 2009). Regarding the former, a case was made by some G20 members for an independent agency – a World Financial Organisation (WFO) – to be set up. A WFO would be tasked with overseeing global financial regulation (Viola, 2019). This option was contrasted with the choice of focussing on the GFC crisis response through the informal institution of the G20. Consideration of the G20's institutional role in responding to the GFC also brought with it a secondary option for institutional innovation – what type of recovery the G20 sought to implement. The GFC coincided with the first major recognition by the G20 of climate change. Thus, G20 members were also confronted by proposals for a green recovery (UNEP, 2009). As a result of the GFC, G20 members faced a critical juncture concerning how the G20 should both institutionally and substantively respond to the GFC.

4.1.4 Mechanisms of production. The G20, ultimately, rejected institutional innovation in the wake of the GFC by adopting self-reinforcing mechanisms of production. As an institution, the G20 reinforced both its set-up structure and substantive focus. This can be seen when G20 member states rejected the concept of a WFO and instead opted for the G20 to be used as the principal body tasked with coordinating the global economic response to the GFC. In direct response to the shock of the GFC, the G20 was elevated to include heads of state. Whilst this was tipped as the G20 demonstrating institutional innovation at the time, Viola (2019) highlights how it was "neither particularly new. . .nor was it particularly innovative". Indeed, the G20 reinforced its "G" format and rejected creating an independent WFO, which would have had a superior legal standing and authority (Viola, 2019). The G20 also exhibited self-reinforcing mechanisms of production regarding the substance of its approach to the GFC. Given its new high-level status, the G20 leaders also had the opportunity to decide the nature of their response to the GFC. Some G20 member states, such as the United Kingdom and the USA, took active roles in promoting a green recovery in response to the GFC (Tienhaara & Downie, 2019). However, a fear of "mission creep" of the G20 resulted in the G20's institutional will for a green recovery to the GFC, ultimately, floundering (Tienhaara & Downie, 2019). Both in terms of the set-up of the G20 and its substantive focus, the G20 employed self-reinforcing mechanisms of production in response to the GFC that led to a rejection of institutional innovation in preference for the status quo.

4.1.5 Legacy. The G20's rejection of options for institutional innovation in response to the GFC created a lasting institutional legacy. The elevation of the G20 to heads of state resulted in cooperation to avoid global protectionist responses and enhance regulatory oversight of the multinational banks (Viola, 2019). However, the powerful states continued their "G" diplomacy to solve collective problems (Viola, 2019). As a result, the GFC did not lead to a fundamental shakeup of the G20 as an institution nor the broader international economic order. According to Viola (2019), this legacy was caused by an institutionalised version of the famous prisoner's dilemma. This being one where states desire more international cooperation yet at the same time seek to avoid domestic compliance costs (Viola, 2019). Such a legacy is one reason why the G20 in subsequent years saw broadening areas of dialogue, yet with limited concurrent support to translate tangible outcomes outside the domain of macro-economic regulation.

4.2 COVID-19

4.2.1 Antecedent conditions. The legacy of the G20's response to the GFC forms the antecedent conditions for its response to COVID-19. In response to the GFC, the G20 demonstrated its utility as a forum for global financial cooperation. Despite this, the G20 largely failed to enact tangible complementary measures, such as by ensuring both economic and environmental resiliency by way of a green recovery. Instead, the relative importance of climate change waxed and waned through various communiqués. This resulted in the G20 becoming an institution where climate issues were discussed but remained isolated in the sherpa track. The principal focus of the G20 on macro-economic strategy was also seen in adjacent sherpa track working groups, including health. Consequently, whilst the G20 continued to be attuned to the risk factors for a financial crisis, its fear of "mission creep" from the GFC meant that prior to COVID-19 it had not taken mainstream notice of the extraneous risks to the economy from phenomena such as pandemics. Thus, the antecedent conditions of the G20 as an institution made it particularly vulnerable to its ensuing shock.

4.2.2 Shock. COVID-19 appeared in November 2019; by March 2020, the World Health Organisation had declared it a pandemic. Many posited COVID-19 as a black swan event, a rare event that in hindsight appears probable. Given the forewarning of a global pandemic, it is contestable whether COVID-19 can properly be called a black swan event. (Inayatullah & Black, 2020). Nevertheless, COVID-19 represented a supply-side and demand-side shock to the global economy that is unparalleled throughout economic history. As the shockwaves of COVID-19 reverberated throughout the globe, the G20 was looked to for a response.

4.2.3 Critical juncture. COVID-19 brought with it a clear opportunity for institutional innovation for the G20. Unlike the GFC, the G20 was already seen as the best institution to coordinate the global economic recovery. It then had to make a decision over the substance of the economic recovery it sought to coordinate. The window of opportunity to "build back better" from COVID-19 was particularly prescient given the immediate impact that COVID-19 lockdowns had in terms of forced digitisation and decarbonisation of the global economy (Seetharaman, 2020). Global greenhouse gas emissions dropped in most sectors around the world due to the pandemic's impacts on industrial supply and demand (Le Quéré *et al.*, 2020). In its November 2020 Leaders' Statement, the G20 recognised this by stating it will make the most of ongoing economic, social, environmental, technological and demographic changes that stemmed from the pandemic (G20, 2020a). However, in the short-term, the G20 has contravened this by focussing on restoring economic growth as quickly as possible. For example, it has not taken up an opportunity prior to COP26 (The 26th Conference of Parties to the United Nations Framework Convention on Climate Change (UNFCCC)) to promote consensus on principles of a green recovery nor the amount of funding required for one (Obergassel *et al.*, 2020). In the medium to long-term, the G20 attempting to get back to "business as usual" threatens to entrench fossil fuel norms, making the Paris Agreement's temperature goals even harder. Nevertheless, options for G20 reform still persists. COVID-19 presents a clear window of opportunity for this reform, making it a critical juncture for the G20 (Nahon, 2020). To determine the G20's possible next steps regarding this possibility, it is important to contrast the GFC and COVID-19 as critical junctures.

4.3 Contrasting the critical junctures: GFC vs COVID-19

Whilst both the GFC and COVID-19 share the characteristics of being critical juncture for the G20, only the latter continues to unfold. Therefore, it is necessary to "contrast the crises" to determine the possible causal implications of COVID-19 for the G20. Rixen & Viola (2016) outline several dimensions to assess institutional development over time, these being: speed, scope and depth. Applied to the case at hand, these dimensions make it clear that COVID-19 is a more "critical" a juncture than the GFC, as it demands more institutional innovation from the G20.

The GFC and COVID-19 can be distinguished by the initial onset of the G20's response and the length of response needed. The "speed" dimension refers to the extent of change, which is divided by the time it takes to occur (Rixen & Viola, 2016). The difference in speed between the GFC and COVID-19 begins with the difference in the G20's response times. It is well recognised that the G20's response to COVID-19 was more delayed and subdued than the GFC (Brown, 2020). Moreover, whilst the economic shock from the GFC was experienced over several years, relatively early in the GFC, the G20 charted a clear, even if controversial, pathway of fiscal discipline to remedy its effects. In contrast, COVID-19 appears to be endemic. This means that even as several G20 members have managed to see rebounds in their respective economies, the ongoing threat of new variants and repeated lockdowns continues to make the economic recovery uncertain, notwithstanding global vaccination efforts. Thus, the differing speeds demanded by the GFC and COVID-19 make them distinct as critical junctures.

The two crises are also structurally distinct in that they demand a different scope of response from the G20. The breadth of change can be understood in the difference in institutional attributes driven by a critical juncture (Rixen & Viola, 2016). COVID-19 had an economic impact threefold greater than the GFC, making it also the largest shock in modern economic history (World Economic Forum, 2020). This unprecedented impact naturally reflects that an equally unprecedented response is also needed from the G20, distinguishing it from the GFC. Whilst the impact of GFC was caused by factors internal to the macro-economic system, the economic devastation of COVID-19 was caused by the extraneous nature of the pandemic. Furthermore, containing COVID-19 has resulted in disruption to supply chains and consumer demand due to lockdowns. Unlike the GFC, COVID-19 is both a supply-side and demand-side disruption. Additionally, the economic impact of COVID-19 has been sector-specific, for example, generating economic "winners" in e-commerce and "losers" in passenger air transport. Remedying this requires that G20 member states adopt a more sector-specific, interventionist approach. This means the scope of the G20's response to COVID-19 is broader than that of the GFC.

The GFC and COVID-19 crises can also be distinguished by the depth of institutional change. "Depth" can be understood as to the degree to which institutional features have either been strengthened or weakened (Rixen & Viola, 2016). In response to the GFC, the G20's institutional features, including its "G" format and focus on macro-economic policies, were reinforced. These deepened features made it more institutionally robust to financial shocks such as the European Financial Crisis (Rixen & Viola, 2016). By contrast, in response to COVID-19, the G20 has appeared more fractured in its response, perhaps because of the divergent views of its member states. This could lead to the G20 undertaking "shallow" change in response to COVID-19, a self-undermining sequence. In this way, the GFC and COVID-19 can be contrasted by the depth of the G20's respective responses.

The comparative dimensions of speed, scope and depth highlight why the GFC and COVID-19 can be considered distinct critical junctures. The enhanced criticality of COVID-19 could mean there is a higher risk in the G20 failing to innovate than during the GFC. This means it is crucial to assess what mechanisms of production the G20 could employ and whether these could result in the COVID-19 having a legacy as a critical juncture or critical wound.

5. COVID-19: critical juncture and critical wound?

COVID-19 represents a critical juncture whereby the G20 could either flex its normative powers in "building back better" through increasing institutional returns. Alternately, the G20 could adopt self-reinforcing and, ultimately, self-undermining mechanisms of production by opting for a recovery rooted in the economic status quo. Given the unfolding nature of the situation, the mechanisms through which the G20 respond likewise continue to develop. Nevertheless, it is clear that COVID-19 presents a unique window of opportunity for the G20 for institutional innovation. Accordingly, in the words of Inger Anderson, Executive Director of the UNEP, governments find themselves "...at a critical juncture here decisions can either further lock in fossil fuel energy systems or transition us to a cleaner and safer future" (Carrington, 2020). Being a juncture, however, interested observers should be primed to watch what the G20 will do with this window of opportunity in 2021 and beyond.

As a critical juncture, COVID-19 will have causal effects for the G20 that depend on the mechanisms of production it employs (Dupont *et al.*, 2020). The G20 has not taken a definitive policy position on whether it seeks to "build back better" as an institution. However, there is already considerable divergence in the practice of member states in this regard (Harvey, 2020). Some countries, such as the European Union, the United Kingdom and the USA, are showing signs of embracing a green recovery (European Commission, 2020; European Commission, 2021; HM Government, 2020; White House, 2021). At the same time, states such as Russia and Australia seem to actively reject notions of building back better (The Moscow Times, 2021; Morton, 2020). This in contrast to other institutions who have embraced notions of a green recovery, including the G7 and OECD through to the World Bank, International Monetary Fund and public banks (Buckle *et al.*, 2020, International Monetary Fund, 2020; World Bank, 2021; Finance in Common, 2020). For the G20 to take an active role in "building back better", institutional reform is needed to direct such change. On the other hand, there is a real risk of institutional redundancy if its leadership is seen to be still absent in the next phase of the COVID-19 recovery (Brown, 2020). Depending on the outcome the G20 pursues in light of COVID-19, its legacy as a critical juncture could amount to either reform or redundancy.

5.1 Opportunity for reform

It was recognised prior to COVID-19 that the G20 demonstrates a high potential to act on green issues but that reform is necessary for this to happen (Tienhaara & Downie, 2019). As a critical juncture, COVID-19 provides a window of opportunity for these and other necessary reforms to occur. For the G20 to take an active role in encouraging its member states to "build back better", it needs to harness the full power of its relevant sherpa track and actively seek to mainstream climate objectives across its work programme and take steps to increase representation and transparency in its wider working. Such reforms would involve the G20 exchanging its prior self-reinforcing mechanisms for those that offer institutional gains.

The G20 could leverage the unique expertise generated by the relevant working groups of the sherpa track to enhance the policy detail and cohesion needed to "build back better". The sherpa track holds particular value as a specialist forum. There remains a risk that its working groups remain isolated, leading to an implementation gap where adequate financing and mobilisation of resources do not follow. Two reforms would be possible and beneficial in remedying this. The first is enhancing dialogue between relevant working groups in the sherpa track, for e.g. climate and energy and the environment, health, trade and investment. The second is mainstreaming the outcome of relevant sherpa track working groups directly into the G20 finance track. This could occur through either the Sustainable Finance Roundtable or by the G20 creating a "building back better" task force. By the G20 unlocking the potential of its sherpa track in these ways, it could foster an inter-disciplinary approach to COVID-19 recovery in the medium-term as well as enhance the resiliency of the global economy to future shocks in the long-term.

Another aspect of potential G20 reform in pursuit of "building back better" comes from applying a climate and sustainability lens to economic development opportunities. In their July 2021 meeting, G20 finance ministers recognised the potential of carbon pricing for the first time in a communiqué (G20 Finance Ministers, 2021). To build on this, the G20 could seek to mainstream climate change objectives further through its institutional set-up. For example, the G20 could also formalise the participation of the UNEP at its meetings rather than continue with its *ad hoc* presence (Tienhaara & Downie, 2019). There is also potential for the G20 to follow the European Investment Bank's suit when its shareholders signalled their intention to pivot to become the EU's "Climate Bank" in November 2019, a plan for which was approved by its shareholders in November 2020 (European Investment Bank, 2020). G20 member states could add the word "sustainable" in front of the Financial Stability Board and in tandem, give it a mandate to focus on climate financing (Kirton, 2020). Additionally, it could add a sustainability focus to a renamed "Global Sustainable Infrastructure Hub" (Kirton, 2020). More than simple name changes, these reforms could foster a new definition of collective G20 interests at this critical juncture for it as an institution (Immergut, 1998).

Accordingly, these measures could be an important signal that the G20 seeks to "build back better" post-COVID-19.

Reforming the G20's admission procedures is another way it could increase its legitimacy and influence in encouraging the world to "build back better". As an institution, the G20 has long been accused of having a democratic deficit due to being a "closed club" of nations. Indeed, membership of the G20 has not grown since its inception, resulting in it now not necessarily reflecting the 20th biggest global economies. G20 members have been able to block the admission of states such as Switzerland (18th largest global GDP). Like Spain (13th global GDP), other states have resigned to being permanent guests at the G20. The G20 endorsing transparent criteria for admission to the G20 would signal that admission is possible. Such criteria would also provide a clear pathway for ascension and grounds for any future need for relegation from the group, which occurred when the G8 became the G7. In addition, reforming the G20's present consensus-based system to a majority vote would also enable reforms not to be subject to the interest capture of one or more of its member states. In the same vein, whilst the G20 has attempted to engage a broader swathe of actors and interests through working groups, these have never been formally legitimated (Viola, 2019). Procedural reform of the G20 could concurrently formalise the status of these working groups, such as women and youth. Efforts to "build back better" are not solely the purview of current G20 members, and should the G20 still aspire to be a "global steering committee", these reforms could ensure it better reflects its global constituency.

Should the G20 choose to "build back better" from COVID-19 by way of reform, the legacy of COVID-19 will be seen in distinct set-up, cognitive and network effects. Set-up effects include broadening its "Concert of Europe" style approach to a more democratic procedure for membership and voting (Viola, 2019, p. 124). This democratisation, in turn, could have the network effect of strengthening the G20's role in the global economic governance schema. Such an effect could be valuable because of the tension already caused by the G20's comparatively slow initial response to COVID-19. On top of this, reform of the G20 through the climatisation of approaches to economic growth could have the cognitive effect of breaking down siloes, particularly between relevant sherpa track working groups and the finance track. In this regard, the first mention of carbon pricing by in a communiqué G20 ministers could be telling for increased meta-cognition by member states that the fate of the environment and economy are equally intertwined (G20 Finance Ministers and Central Bank Governors, 2021). Whilst the need to reform the G20 was highlighted before COVID-19, its conception as a critical juncture offers the G20 a unique window of opportunity for reform. COVID-19 could thus be a critical juncture for the G20, where it "builds back better" through a combination of internal reform and an external readiness to confront the twin crises of COVID-19 and climate change.

5.2 Risk of redundancy

The G20 could also face a critical wound in COVID-19, should it become redundant as an institution by failing to innovate. HI is instructive when it illustrates that a failure to respond adequately at a critical juncture could be tantamount to institutional erasure (Bell, 2011). This is particularly so for institutions like the G20 who belong to the highly contested realm of global economic governance. The G20 itself sprang up in direct response to the perceived weaknesses of the G7. Should the G20 seek to restore the economic status quo in response to COVID-19, it risks the very same network effect of institutional redundancy. As such, the G20 risks being left behind at a time when significant groupings such as the G7 (G7 Leaders, 2021) and OECD (2020), in tandem with institutions such as the World Bank (2021) and International Monetary Fund (2020), are seeking to "build back better" from COVID-19. This could occur from the G20 lacking the necessary institutional expertise and efficacy to "build back better" as well as it being seen as dysfunctional due to divergent practice of green recoveries amongst its member states. If unaddressed, these risks could weaken the G20 as an institution and, in turn, result in institutional redundancy and at worst, redundancy.

Given the popular view of the G20 as an institutional "first-responder" for macro-economic crises, its slow and subdued response to the COVID-19 pandemic thus far hints at a real risk of institutional redundancy. G20 leaders met in an Extraordinary Summit on 26 March 2020 to discuss COVID-19 and promised to use "to use all available policy tools" to support countries in need and "swift implementation" of its emergency response (Herszenhorn, 2020). Notably, however, the G20 did not schedule any additional meetings even despite the later emergence of the subsequent waves of COVID-19 (Kirton, 2020). The Leaders' Summit held in 2020 under the presidency of Saudi Arabia provided a first glimpse of the institutional approach of the G20 in response to post-pandemic planning. However, the notion of a green recovery was not strong in the discussions nor the final communiqué released (G20, 2020c). Given the unprecedented nature of COVID-19, the G20 could be taking their time to implement a more coordinated policy plan (McKibbin & Vines, 2020). However, an assessment of the wider field of action to the G20, particularly the G7, reveals that this is not likely an adequate explanation. Instead, by failing to react responsively at the critical juncture of COVID-19, the G20 risks losing its institutional expertise in confronting economic crises, especially as they increasingly become intertwined with health and the environment.

The G20 also risks redundancy for its lack of coordinated resolve to "build back better" from COVID-19. This aspect is representative of the increasingly divergent implementation of green recovery measures amongst G20 member states. Some G20 members like the European Union are taking the lead in "green" stimulus, whilst others such as Russia are inversely funding an almost exclusively "dirty" stimulus (Global Recovery Observatory, 2021). By contrast, all OECD states have implemented, at least, some policies consistent with "building back better" (O'Callaghan & Murdock, 2021; Ministry for the Environment (Japan) *et al.*, 2021). The trend of green recoveries is even stronger amongst the G7 alone. Divergence in the practice of G20 member states may have led to a comparatively weak response at the 2020 Riyadh Summit. This possibility is further extenuated by the G20's unanimous voting procedure, which restricts efforts at genuine reform to "build back better" (Viola, 2019). Whether the G20 can surmount these differences in the medium term with the Italian (2021) or Indonesian (2022) presidencies remains to be seen. That said, should the G20 fail to take a coordinative role in "building back better", seemingly *the* major economic transformation occurring in the wake of COVID-19, it could lose its pre-eminent status to rival governance groups that are.

6. Conclusion

The G20 formed as a shock absorber for economic perils caused by globalisation. Since its inception in 1999, the G20 has had a growing and important role in macro-economic stabilisation and harmonisation. Over its two decades of existence, the G20's remit has solidified and expanded into a self-anointed role as a "steering committee" of the global economy. The G20's expanded remit comes primarily from its adoption of a sherpa track, where issues complementary to the financial track are discussed as a means of enhancing broader economic resiliency. Many of the sherpa track's themes address the substance of current calls to "build back better" from COVID-19 – including climate, energy and digitisation. Whilst it is clear that COVID-19 has driven advancements in these areas, what is not clear is whether the G20 will use the window of opportunity COVID-19 presents for institutional innovation.

As a methodology HI seeks to understand the long-term trends of institutional development in order to assess shocks, such as COVID-19, within their institutional context. Previous accounts of the G20 from a HI perspective challenge the idea that the G20 is a transformative institution (Viola, 2019). The transformative potential of the G20 is instead hampered by its historical legacy, piecemeal development and self-reinforcing dynamics, all of which emphasise its path dependency (Viola, 2019). By adopting a HI perspective, this contribution seeks to place the impact of COVID-19 on the G20 squarely within its institutional context. By analysing the GFC as a comparative example of a critical juncture, it finds that whilst both the GFC and COVID-19 represent critical junctures for the G20, the latter is more "critical" a juncture. Differentiating these critical junctures in this manner helps providing a more robust account of the legacy COVID-19 that is likely to have for the G20.

COVID-19 being a likely critical juncture for the G20 implies a future legacy of either reform or redundancy. Reforms the G20 could implement are both procedural and normative – ranging from enhancing inter-track dialogues to increasing the transparency of its admission process. At the same time, there are hints at the G20's possible institutional redundancy in light of allegations that it has been "AWOL" in its response to COVID-19. Should the G20 continue to fail to innovate in response to COVID-19, it risks being surpassed by its institutional contemporaries that are seeking to "build back better". Consequently, the G20's institutional response to COVID-19 is not only a central part of its institutional future, but is also a crucial test of whether it still has one. In this way, COVID-19 could represent both a critical wound and critical juncture for the G20.

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