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Stefan Kirchner, David Seibt, Simon C. Pohl

How do Plattforms Change?
A general framework applied to Airbnb in London in the context of Covid-19

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Author of this Issue: Stefan Kirchner, David Seibt, Simon C. Pohl
Editing and Proofreading: Lucie Bernroider

E-Mail: info@sfb1265.tu-berlin.de

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Stefan Kirchner, David Seibt, Simon Pohl

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About the authors:

Prof. Dr. Stefan Kirchner is professor for sociology at FAU Erlangen-Nürnberg. His research focuses on social orders brought about digital platforms and the emerging empirical opportunities that come with platform data.

Dr. David Seibt has held a tenure-track position at the Institute of Sociology at Johannes Kepler University Linz since August 2024. He completed his doctorate at Technical University of Munich in 2020. From 2020 to 2024 he served as a postdoctoral researcher at the Chair for the Sociology of Technology and Innovation at TU Berlin. His research focuses on digital platforms, the transformation of organizational fields, and distributed innovation processes.

Simon C. Pohl is a PhD-candidate and research associate at the CRC 1265 "Re-Figuration of Spaces". Since 2022, he has been part of subproject C07 "Platform Economy: Spatial Conflicts over Airbnb between Global Marketization and Territorial Containment". His work revolves around the spatial nature of Airbnb and its regulation and the development of big data methodologies to support this research.

Abstract

This article presents a novel framework for understanding how digital platforms change, integrating institutional theory from a perspective that views platforms as rule-based social orders. We identify five mechanisms of incremental change, situated between the extremes of hyper-stability and collapse. Applying this framework to Airbnb in London during and after the COVID-19 crisis, we find that continuity was the dominant dynamic, with the platform demonstrating resilience and adaptive maintenance despite significant guest-side exhaustion. While hosts' entries to and exits from the platform declined during the crisis, the platform's overall logic of action remained intact, despite some evidence of conversion, such as an increase in the minimum duration of stays. Notably, professional listings exhibited temporary divergences, but no dramatic shifts occurred between amateur and professional hosts. The framework presented here advances the sociological understanding of platform dynamics by offering a comprehensive tool for analyzing incremental changes and facilitating structured comparisons across platforms, thereby adding to the refiguration of space approach in times of crisis and beyond.

Keywords: *Platform change, Airbnb, COVID-19, incremental change, social order, continuity, resilience, platform dynamics, network space*

1. Introduction

Digital platforms such as Airbnb have become important arenas of economic activity and societal transformation. Despite a growing number of empirical studies, platform research still suffers from a limited understanding of what platforms are and how they change in the face of dynamic social environments. These shortcomings became particularly apparent during the COVID-19 crisis, when many commentators anticipated that platforms would change substantially, but often lacked a theoretically informed basis for their claims. Airbnb provides a case in point. Expectations of change and the wealth of available empirical data elicited a plethora of studies, but most investigations have been based on an incomplete or selective theory of digital platforms, leading investigators to identify only certain types of change while ignoring others. Currently, the platform debate in general––but Airbnb in particular––lacks a comprehensive sociological concept of platform change, thereby systematically limiting empirical investigations' explanatory potential.

Empirical studies have found that almost all aspects of platforms are subject to change over time, including the platform organization's business model (Gawer, 2009; Kohler & Chesbrough, 2019), the technologies and interfaces used (Helmond et al., 2019), and the types of platform users and their relationships (Tiwana, 2015). However, empirical studies often lack a comprehensive concept of what platforms are, so they typically focus only on select aspects of platforms, such as organizational decisions, technical infrastructures, or the economics of multi-sided markets. Therefore, researchers thus far have identified only particular mechanisms of platform change while disregarding others. In particular, they fail to recognize that different aspects of platforms function together, and multiple mechanisms of change interact to shape observed trajectories.

The disjointed state of theories on platform change became particularly evident amid the vibrant research on Airbnb during and after the COVID-19 crisis. While massive changes were predicted early on, divergent theorizations of the platform led to various empirical foci and limited our understanding of the complex changes involved. This research mostly produced ad-hoc predictions, such as marketplace breakdown, or focused on purely economic developments, such as price changes and market performance. Despite the exceptionally good empirical base documenting the specific changes that occurred within Airbnb, little effort was made to theorize the underlying social mechanisms of platform change. Most qualitative approaches focused on Airbnb guests and hosts' decision-making, while most quantitative research relied heavily on econometrics and orthodox economic theory (Benítez-Aurioles, 2022; Ferreira et al., 2023; Filieri et al., 2023; Milone et al., 2023). Broader sociologically informed approaches remain scarce, with very few exceptions (Gil et al., 2023; Sequera et al., 2022). Overall, platform research in general, but particularly on Airbnb, still lacks a comprehensive theoretical foundation on which to make general claims about how platforms change.

To fill this research gap, we developed a comprehensive, sociological framework that conceptualizes different mechanisms of platform change, then applied this framework to the Airbnb case to demonstrate its usefulness and applicability. Our framework builds on an understanding of digital platforms as technologically mediated social orders. We view digital

platforms as comprising a *core* organization operating a technical infrastructure, a *periphery* of heterogeneous actors using that infrastructure to interact, and a set of *interfaces* that enable and regulate those interactions. While this general understanding has been used widely in platform research (Ametowobla & Kirchner, 2023; Seibt, 2024), we argue that extant research on platform *change* has tended to focus selectively on individual elements of this definition, leading researchers to arrive at partial accounts of the observed phenomena. However, our social order view enables us to relate these partial theories on platform change to established approaches of change in social orders, including theories on path dependence (Arthur, 1994) and institutional change (Streeck & Thelen, 2005). In the present study, we demonstrate our concept's applicability by analyzing Airbnb's development in London during and after the COVID-19 crisis.

In the context of the refiguration of space approach (Knoblauch & Löw, 2017), Airbnb as a platform constitutes an example of a digital network space (Kirchner & Pohl, 2025, forthcoming; Pohl et al., forthcoming). With its fast growth and worldwide expansion, developments at Airbnb became particularly relevant during the COVID crisis, when humans' movements were tightly restricted, thereby threatening Airbnb's survival as a network space comprising digital market exchanges. In this context, Löw and Knoblauch (2020) have argued that the COVID 19 pandemic not only disrupted everyday life, but also potentially fundamentally refigured social spaces. The authors contend that the crisis gave rise to a "state of emergency" that could potentially serve as a precursor to a lasting transformation of societal structures. This emergent and temporary order was characterized by new forms of state intervention and collective solidarity reflected in the rapid implementation of measures designed to curb the spread of the virus.

Central to Löw and Knoblauch's (2020) argument is a dichotomy between two spatial logics. On the one hand, a territorial logic is embodied in the concept of the "container space," wherein national borders, private households, and physical bodies are isolated and regulated. On the other hand, network logicsor "network spaces" emerge through digital mediation and global connectivity, compensating for the curtailment of face-to-face interactions. The pandemic exposed social interactions' inherent materiality and relationality, thereby intensifying the tension between state-controlled, territorially bounded order and global networks' dynamic, boundless nature. The pandemic functioned as a catalyst for rethinking and reshaping the spatial and social orders that underpin contemporary society. The authors argue that the resulting "dichotopy" not only magnified existing societal contradictions, but also raised critical questions regarding the future of the overall figuration of both physical and digital realms in a post-pandemic world. Against this backdrop, Airbnb's dynamics present a great case study on the temporal dimension of what elsewhere has been called "regimes" or *"spatially bound regimes"* (Anong Biaback et al., forthcoming; Kirchner & Baur, forthcoming) because such dynamics can highlight the various conceptual and empirical ways in which regimes, such as digital platforms and their network spaces, can and do change over time.

Our comprehensive framework enables a theory-based empirical analysis of different variants of platform change. The framework integrates seemingly contradictory explanations of platform dynamics and emphasizes that platform stability and change cannot be explained by focusing narrowly on platform *technologies*, platform *organizations*, or platform *users*, but also

must account for their *interplay*. Our empirical analysis of Airbnb in London underscores that several of the theorized change mechanisms can be present simultaneously, while others were absent in the selected case. We argue that most cases of platform change involve such a composite pattern of change mechanisms. Our insights build on spatial approaches that have assumed a substantial refiguration of network spaces in the context of the pandemic, which triggered large-scale territorial responses. The comprehensive framework presented here improves our understanding of these complex patterns of stability and change by overcoming existing approaches' selectiveness and integrating regime approaches with the refiguration of space.

2. Theory: Platforms between stability and change

The growing academic attention being paid to platform change has fostered divergent explanations of platform dynamics, which we group into three perspectives with widely varying expectations of change. These perspectives roughly correspond to research focusing on platform organizations, platform interfaces, or platform users as the primary loci of platform change. We briefly introduce these views below, then add a fourth approach, the *social order view*, which provides a more comprehensive framework.

2.1 "Flexibility View": Malleability due to digital technologies

The first perspective, which we term the *flexibility view*, suggests that platforms are highly malleable due to their digital infrastructure and interfaces. This view emphasizes that platform organizations do not directly control all the resources needed to deliver goods or services. They do not maintain staff beyond a relatively small core organization, nor do they invest in facilities beyond their core infrastructure. For example, Davis portrays platform companies such as Uber as "web page enterprises" (Davis, 2016, pp. 511–514) that dynamically assemble and reassemble as demand requires.

While this flexibility view focuses on platforms' overall dynamism, it cannot account for their stability over long periods of time. Constant, rapid change among participants, activities, and rules should be associated with high degrees of volatility. From a sociological perspective, if all changes in the environment triggered changes in the platform's composition, participants would lack the minimum stability necessary for effective coordination, and no stable social order would evolve (Beckert, 2009; Fligstein, 2001; Sydow & Windeler, 2020; Windeler, 2018). Indeed, some studies have demonstrated that platform users struggle with unpredictable changes to the platform's core functionality and interfaces (Grieser, 2023; Nieborg & Poell, 2018), and even dominant platforms may collapse following the mass exit of peripheral actors (Dolata, 2019, pp. 192–193). However, many platforms endure over time despite rapid changes in their social environments.

2.2 "Decision view": Stability and change as organizational action

The second perspective, which we call the decision view, highlights that platform dynamics are shaped by decisions made by a focal organization at the platform's core. Platform organizations set rules for the use of their infrastructures and monitor and sanction the activities of peripheral actors, including users and complementors (Ahrne et al., 2015; Kirchner & Schüßler, 2019). Therefore, when faced with shifting social contexts, such as economic upheavals or regulatory shifts, platform organizations enforce or change rules to suit their interests. This view emphasizes "platform power" by portraying platform organizations as central actors in a new form of capitalism (Langley & Leyshon, 2017), in which they rival the regulatory power of the state (van Dijck et al., 2018). "Platform leaders" (Gawer & Cusumano, 2002) may orchestrate far-reaching ecosystems and act as "permissive potentates" (Vallas & Schor, 2020) that foster desired user activities and sanction undesired ones.

Although the decision view rightly emphasizes platform organizations' role in managing platform dynamics, the emphasis on platform power runs the risk of overestimating the ability to control peripheral actors' activities. Platform organizers clearly act as rule makers who facilitate user activities (Ahrne et al., 2015; Kirchner & Schüßler, 2019). However, peripheral actors may still use the platform in unpredictable ways or exit it altogether. Therefore, platform organizations face the challenge of ensuring continuous user engagement while monitoring user activities and sanctioning potential infringements. This requires substantial resources even in stable times and becomes even more difficult under conditions of fierce competition, rapid innovation cycles, economic crises, and regulatory changes. This limits the focal organization's leverage and requires that explanations on platform stability and change must account for peripheral actors.

2.3 "Path dependence view": Hyper-stability due to network effects

The third perspective, which we term the *path dependence view*, considers the platform's periphery as the key site for its stability and change. According to this position, platform architectures generate increasing returns for participating actors by establishing direct and indirect network effects (Katz & Shapiro, 1985). Platforms stabilize through positive feedback loops, in which they become more useful the more they are used. This may ultimately result in path dependence (Arthur, 1994), in which incumbent platforms are almost impossible to dislodge (McIntyre et al., 2020).

The path dependence view explains why some platforms exhibit a high degree of continuity once they have assumed incumbent positions. While increasing returns are present, platforms continue to grow. When increasing returns reverse, usually through exogeneous shocks, the platform weakens rapidly. Focusing on the binary between rapid growth and sudden collapse, this view is less effective in explaining gradual forms of platform change. As a result, the path dependence view might underestimate incremental and endogenous change on platforms. Overall, this brief review raises the question of how platform research may theorize gradual changes beyond the two extremes of hyper-stability and rapid breakdown.

2.4 "Social order view": Between hyper stability and sudden collapse

Building on various insights in the literature, we argue that viewing platforms as *technologically mediated social orders* (Ametowobla & Kirchner, 2023) offers a more comprehensive understanding of platform dynamics beyond hyperstability and rapid collapse. It extends the views presented above by focusing on the relationship between platform organizations, platform users, and the technically mediated rules governing their interaction.

To conceptualize the dynamics of platforms as social orders, we drew on Streeck and Thelen's (2005) model of gradual institutional change. Streeck and Thelen argued that institutions can be modeled as regimes in which rule makers set rules to govern rule takers' behavior. Change is endogenous to such regimes because formal rules never fully determine their practical enactment. Instead, rules always require rule takers' situated interpretation, which is shaped by (group-specific) *logics of action*. Over time, the difference between formal rules and their enactment may lead to various forms of gradual change between the extremes of near-complete *continuity* due to adaptive change or path-dependency, and rare episodes of *collapse* due to external shocks.

We adapted this general concept of institutional change to platforms as technologically mediated social orders. We treated platform organizations as rule makers and platform users as rule takers.[1] Thus, platform change may result from a *change in the rules* implemented by the platform organization or a *change in rule enactment* by platform users. For example, the former may take the form of updated user agreements or technological interfaces. The latter may occur as existing users change their logic of action, or as user groups' overall composition changes following large-scale entries or exits. We argue that these aspects of change interact in different ways in each of the five mechanisms of incremental change described by Streeck and Thelen, as well as the two extreme cases of platform continuity and collapse.

2.5 A comprehensive framework: Types of continuity and change on platforms

This section introduces the different kinds of change and their underlying mechanisms, then relates them to pertinent concepts in the literature on platform change (see Table 1). Continuity and collapse constitute the two edge cases of platform change. *Continuity* refers to the reproduction of the social order. Regarding platforms, continuity may be the result of path dependence due to increasing returns for platform users resulting from network effects, learning by using, scale economies, irreversible investments etc. (Arthur, 1988, pp. 590–591; Beyer, 2005). It may also be the result of adaptive change initiated by the platform organization and platform users to maintain an existing order despite changes in the environment (Streeck & Thelen, 2005, p. 9). Conversely, *collapse* refers to the sudden breakdown of the social order. A collapse of platforms may be triggered by sudden changes in the platform's environment, such

[1] Platform organizations aim to govern user activities by setting formal rules and their inscription on the platform's technical interfaces. However, in the absence of binding contracts, platform users may engage with the platform based on their own logic(s) of action.

as entry by a superior competitor or new political regulations. Such external shocks may lead users to exit the platform in large numbers, thereby quickly terminating its source of increasing returns. They may also invalidate the rules set by the platform organization or undermine its business model in other ways, leading the organizer to close permanently.

Most cases of platform change fall in between these two extremes and can be described by adapting the five mechanisms of gradual change of social orders proposed by Streeck and Thelen (2005, p. 31). We argue that each mechanism represents a unique constellation of changes in rules, groups of rule takers, and their respective logics of action.

Drift describes a slippage in the dominant logic of action following the neglect of maintenance despite external changes. On platforms, this may involve a (strategic) omission of rule enforcement or rule adaptations by the platform organization despite an increasing transgression of rules by users.

Conversion describes the reinterpretation of existing rules and their redeployment to new purposes. On platforms, this occurs when many existing platform users alter their logic of action and utilize the platform for new purposes. *Layering* accounts for the addition of new components to established institutions, which changes their overall composition due to differential growth in the institution's various elements. In the case of platforms, layering may occur with the addition of new elements to existing interfaces or user agreements, as well as the influx of new users who adhere to a hitherto nondominant logic of action and substantially alter the composition of groups in the platform periphery. *Displacement* describes the introduction and active adoption of alternative rules that replace the formerly dominant ones. On platforms, this occurs when a platform organizer replaces key rules or central interfaces so that users increasingly follow a new logic of action, such as changing key policies, offering fundamentally different goods or services, or pursuing different goals. *Exhaustion* refers to the gradual depletion of rules, as they are enacted less often and eventually become obsolete. On platforms, depletion manifests as a steadily declining number of active users that slowly reverses network effects and causes the platform, or key parts of it, to fall into disuse.

While each of these mechanisms could be dominant at any given moment, we posit that multiple mechanisms can be present simultaneously, rendering a given situation an interplay between counteracting, reinforcing, and co-constituting mechanisms of continuity and change. We agree with other authors (Dolata, 2011, p. 139) who have argued that mechanisms of change, as described by Streeck and Thelen, may form composite patterns over time (see, also, Mahoney & Thelen, 2009). Therefore, for a given empirical investigation, it is useful to distinguish between dominant and subordinate mechanisms, and to consider that the observed pattern of platform change or continuity may be the result of combinations.

Tab. I: Types and mechanisms of platform stability and change

Type	Mechanism	General description
Continuity	Increasing returns and adaptive change	Actors continuously enact rules based on their logic of action
Drift	Neglect of maintenance	Unsanctioned rule breaking by actors results in slippage in the logic of action
Conversion	Redirection, reinterpretation	Actors deploy rules for new purposes, enacting an alternative logic of action
Layering	Differential growth	New actors enter and enact rules based on alternative logic of action
Displacement	Defection	Changed rules lead actors to enact an alternative logic of action
Exhaustion	Depletion by decreasing returns	Actors slowly cease enacting rules and retire (logic of) action
Collapse	Path break	Actors abruptly discontinue enactment of rules and (logic of) action

Note: own depiction[2]

3. Applying the framework to the case of Airbnb during COVID-19

Viewed through our analytical lens, Airbnb contains the basic elements of institutional orders: *Rules* set and enacted by *actors* (rule makers and rule takers) based on specific logics of action. *Rules*, which may be formalized in user agreements or inscribed in the platform's interfaces, regulate actions and social relations on the Airbnb platform. Airbnb set them as the platform organizer (rule maker) to facilitate a digital marketplace from which the company extracts profits. The rules are enacted by platform users (rule takers), including hosts offering local lodging and guests seeking accommodations. The *logic of action* refers to different user groups' general orientations. For example, while the platform is used mainly for short-term lodging (aimed at tourism and business travel), a distinction exists between professional listings oriented toward financial profit and amateur listings with a community-oriented motive who mostly generate supplementary income.

Following the conceptualization above, we can also operationalize the mechanisms of stability and change in the Airbnb case to prepare our empirical investigation:

[2] With the aim of incorporating the most relevant variants without producing an overly complex list, our presented mechanisms would not apply well to rare situations of actors and rule change, e.g., in a situation of a complete overhaul or revolution. Also, we foresee additional situations in which rules and actors substantially change while the logic of action persists due to rigid socialization or ineffective rule enforcement.

Continuity derives from both continuous maintenance by Airbnb (platform organization) and hosts (users), as well as increasing returns from network effects in the platform periphery. Airbnb continuously adapts rules to maintain the platform in changing social contexts. Hosts invest in setting up and maintaining their listings, developing their reputation, and routinely managing their guests (Bruni & Esposito, 2019; Semi & Tonetta, 2020). Increasing returns derive from network effects between hosts and guests participating in the platform's marketplace. Empirically, continuity prevails when the overall composition of listings and their key characteristics remain unchanged.

Drift manifests when users start disregarding key rules and Airbnb refrains from enforcing these rules, leading to a gradual shift in the logics of action in the marketplace. Such behavior may undermine Airbnb's position as a market organizer, e.g., lead to an increase in off-platform bookings or fraudulent activities. Empirically, this would result in a publicly visible tendency for Airbnb hosts to break the rules and engage in deviant activities, with no enforcement or adjustment by Airbnb.

Conversion involves users utilizing the platform and its rules to pursue new purposes, such as hosts offering new services or changing established listings' key characteristics. For example, this would manifest in a shift from amateur to professional orientations (or vice versa), or from short-term to long-term lodging.

Layering occurs on the Airbnb platform after users with alternative logics of action enter the market and change listings' overall composition in the marketplace. Empirically, this would manifest in a substantial number of new listings with key characteristics distinct from established listings.

Displacement would entail Airbnb, the platform organizer, changing the rules to facilitate new logics of action on the platform. Empirically, this would take the form of substantial changes in the platform's rules and interfaces that allow for alternative types of services, e.g., office space rentals or offering services beyond rentals.

Exhaustion describes a situation in which users (hosts and guests) stop using the platform, no longer maintain their profiles, or leave the platform, thereby triggering a cycle of decreasing returns. Empirically, this mechanism results in guests ceasing to book accommodations, listings becoming unavailable, or listings exiting the marketplace.

Collapse in the case of Airbnb refers to an extreme scenario in which the entire platform suspends activities, which would empirically result in users abandoning the marketplace or Airbnb deciding to discontinue operations.

Differentiating between these mechanisms within a comprehensive framework improves on existing studies of Airbnb, which tend to engage only with selected aspects of the platform, thereby effectively disregarding the presence of multiple change processes. This becomes particularly obvious in research that engages with the dynamics of Airbnb during the COVID-19 pandemic.

Early contributions focused on platform users and expected a massive breakdown that we have theorized as *exhaustion or collapse*. Only months into the crisis, Dolnicar and Zare (2020) and Gerwe (2021) assumed that depletion had occurred in the marketplace due to health risks and financial reasons. Several studies tried to identify a shift from Airbnb listings to the traditional rental market, yet found only limited effects (Buckle et al., 2020; Kadi et al., 2020; Shan et al., 2023). Another set of studies focused on the platform organizer and reported instances in which listings were adapted to changing platform rules. We theorized these as cases of *displacement.* The most prominent example was the introduction of "online experiences." Introduced as a way for hosts to compensate for reduced revenue, this section of the platform soon developed a life of its own, with distinct logics of action that were largely disconnected from the traditional rental market facilitated by the platform (Cenni & Vásquez, 2021, 2022; Norum & Polson, 2021; Pasquinelli et al., 2023; Zhu & Cheng, 2022).

Other studies focused on platform users' agency and reported cases of what we would term conversion, in which hosts used existing rules for new purposes. Some studies have found that listings switched from amateur to professional orientations (Fischer & Roelofsen, 2022). Furthermore, many hosts switched from a logic of short-term rental to longer rental periods (Fischer & Roelofsen, 2022; Gómez–Déniz et al., 2023; Llaneza Hesse & Raya Vílchez, 2022).

Due to a lack of anticipated growth, *layering* provided no major theme in the Airbnb research during the COVID-19 crisis. Similarly, *drift,* understood as gradual change through increasing rule-breaking on the platform, did not feature prominently in the literature. Furthermore, we would label a large part of the observed behavior during the COVID crisis as continuity due to maintenance activities. Airbnb adapted their rules, and many hosts adapted their listings to maintain the established social order on the platform despite environmental shifts.

Notably, from a social order perspective, not all Airbnb listings followed the same logic of action. Even before the COVID-19 crisis, Airbnb hosts followed either an amateur logic or professional logic of action, and changes were thought to differ between the two. Most prominently, Dolnicar and Zare (2020) argued that amateur listings would be less affected by the crisis than income-driven professional listings. Therefore, many professional listings were expected to exit the platform and lead to a resurgence in amateur listings. Other studies predicted that professional listings, owing to their strong financial or organizational backing, would tend to change their key characteristics to maintain profits (Farmaki et al., 2020; Gil et al., 2023; Miguel et al., 2022). Here, the literature essentially assumed that listings motivated by different logics of action would be affected differently by the COVID situation.

Building on our comprehensive approach and the Airbnb literature, we posited the following research questions for our empirical case analysis: *(1) What theorized types of continuity and change in Airbnb listings can be observed before, during, and after the COVID crisis? (2) Do types of continuity and change differ across amateur and professional listings?*

4. Case, data, variables, and methods

4.1 Analytical strategy: A two-pronged approach to Airbnb in London during the COVID-19 crisis

To demonstrate our analytical framework, we investigated Airbnb's digital marketplace in London before, during, and after the COVID crisis. While the pandemic constituted a substantial shift in the environmental conditions for Airbnb activities, it created a natural experiment that allowed us to study platform patterns that are not yet well-understood. We selected London specifically because it presented a salient case in the debate and did not experience any major regulatory shifts during our observation period.[3]

We pursued a two-pronged approach to gather a reliable information base. For an overview and general case description, we gathered publicly available materials on the Airbnb core organization and its users' (guests and hosts) reactions. Furthermore, we utilized extensive and historical platform interface data from the Airbnb website to describe and analyze the observable dimensions of our theorized types of continuity and change quantitatively.

4.2 Data

For our analysis, we utilized various information and data sources.

4.2.1 Publicly Available Information

We gathered publicly available information (particularly from the Airbnb website, press releases, forum posts, and news media coverage) to facilitate a comprehensive description of our case, as well as a reference for interpreting our quantitative results. The publicly available information provided the basis for assessing the presence or absence of the change types *drift*, *displacement*, and *collapse* in particular.

4.2.2 Platform interface data (Web Scraping)

We utilized platform interface data from the Airbnb website to ascertain the presence or absence of the change types *conversion*, *layering*, *displacement*, and *exhaustion*. Our platform interface data were derived from downloads provided by insideairbnb.com, an activist website run by Murray Cox that provides web-scraped data from the Airbnb platform. We limited our analysis to datasets from 2016 onward. The regular one-month interval comprised 89 scraping dates and experienced minor interruptions. Six gaps produced lags of two or three months, as seen from the latest scraping date (see Figure 1).

[3] We assumed that substantial regulatory changes could prompt overlapping drivers of platform change.

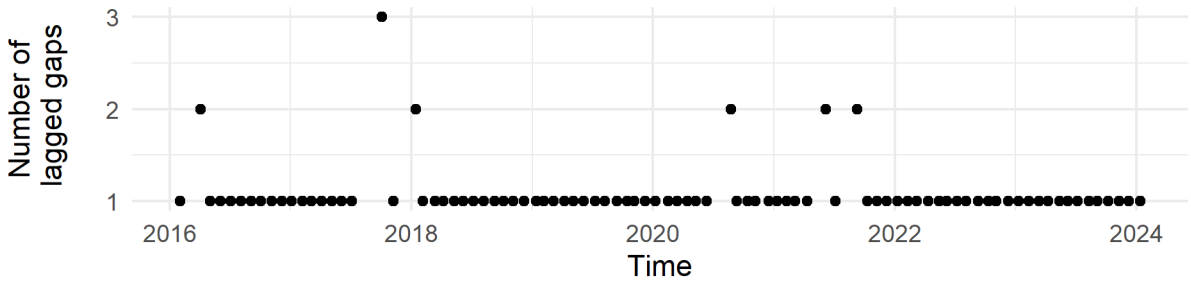

Fig. l: Scraping intervals of available datasets with lagged gaps displayed. Note: own calculations and depiction; data sourced from Inside Airbnb

The monthly web-scraped Airbnb data from insideairbnb included two datasets: (a) The *listings dataset* comprised selected information on all listings accessible on the Airbnb website on the date of scraping for the administrative boundaries of London. This dataset holds detailed information on a large number of individual listings, such as availability, amenities, and descriptions. (b) The *reviews dataset* comprised all reviews from all listings accessible on the Airbnb website on the date of scraping for London. The reviews comprised all reviews before the scraping of the accessible listings and included the dates the reviews were posted.

After evaluating data integrity and removing duplicates, we appended the monthly datasets to construct a combined dataset for more than six million repeated monthly *listing* observations, as well as more than four million unique, non-automated *reviews.*

4.3 Variables

4.3.1 Listings dataset

We computed several variables from the listings dataset as follows: The variable *Available* denotes whether a listing is available for booking for at least one day in the next 365 (1: yes; 0: no).[4] By reversing the coding, we produced the variable *Unavailable* (1: yes; 0: no). Aiming at a maximum contrast of the action logics, we included only two types of listings by combining information on availability and whether a listing's host offers only one listing or more than one. We coded a listing as *amateur* if only one listing per host was found with less than 120 days of availability in the next 365 days. More available listings with more than one listing per host were coded as *professional multi* listings.[5] The variable *minimum nights* refers to the lowest number of nights guests need to stay to book a listing. We only included values of available listings. To account for the potential differences between amateur and professional listings, we coded two variables that included information on minimum nights exclusively for the two listing types: *amateur minimum nights* and *professional multi minimum nights*.

[4] While the one-day threshold produces a good general indicator of whether or not a listing is active, the measure might be slightly distorted in very few cases because extremely well-booked listings will also be counted as unavailable.
[5] Note that this focused coding procedure does not consider the intermediate category of *professional single* listings––only one listing per host and availability 120 days or more in the next 365 days. Thus, the listings of the professional single type fill the gap between all available listings and the sum of amateur and professional multi listings.

As for time-based information, we utilized the unique ID numbers of a listing to connect information across multiple scraping dates. In examining a case (t) with this procedure going back one month (t-1) or going forward one month (t+1), we sacrificed one observation period to determine the difference between dates. We excluded all scraping gaps (see Figure 1) from our calculations to avoid distorted calculations. To discern an *entry* of a listing (t > t-1), we coded the first time the listing ID appeared in the whole dataset (1: yes, 0: no). Conversely, the variable exit denotes whether the listing id (t > t+1) appeared for the last time in the whole dataset (1: yes, 0: no). As for differences across the listing types, we computed the variables exclusively for each category: *amateur exit* and *professional multi exit.*

Using the listing ID across scraping dates once more, the dataset also allowed us to determine whether a listing changed its characteristics. For the variable *remain amateur*, we coded (1: yes, 0: no) when a listing is amateur (t) and remains amateur (t+1). We repeated the procedure for the variable *remain professional multi*. Similarly, we coded the variable *amateur becomes unavailable* (1: yes, 0: no) when a listing is amateur (t) and becomes unavailable (t+1) at the next observation date. We repeated the procedure for the variable *professional multi becomes unavailable*.

For our analysis, we aggregated all computed variables in the dataset to monthly data and calculated counts and means, as well as medians, for the respective month, as indicated in Table 2. For several variables, we computed percentages, which denote the share of cases with a particular characteristic (e.g., amateur exit) measured against the whole category (e.g., amateur) relating the characteristic to the total of that category (e.g., share of exits within amateurs). The variable *total* represents the number of all listings for the scraping time.

Tab. II: Descriptive statistics for variables in the listings dataset (monthly aggregated)

Variable	N	Mean	Std. Dev.	Min	Pctl. 25	Pctl. 75	Max
Total	89	71,067	13,518	32,646	66,152	80,064	92,684
Available	89	46,116	8,138	26,873	40,093	53,099	59,488
Unavailable	89	24,952	8,639	5,384	20,524	31,280	34,805
Type of listing: amateur	89	9,196	2,235	4,266	7,365	11,331	13,442
Type of listing: professional multi	89	25,796	5,930	12,073	21,253	30,450	36,125
Minimum nights (mean)	89	5.2	1.9	2.6	3.4	6.2	9.4
Minimum nights (median)	89	2	0.15	2	2	2	3
Entry (t >t-1)	88	3,856	1,956	646	2,803	4,679	13,209
Exit (t >t+1)	88	3,242	1,275	1,003	2,373	3,826	8,955
Remain amateur (%) (t >t+1)	88	76	5.5	51	74	79	84

Variable	N	Mean	Std. Dev.	Min	Pctl. 25	Pctl. 75	Max
Remain professional multi (%) (t >t+1)	88	89	3.9	72	88	91	94
Amateur exit (%) (t >t+1)	88	6.1	2.3	2.2	4.7	6.9	18
Professional multi (%) (t >t+1)	88	6.1	2.6	1.9	4.7	6.4	18
Amateur becomes unavailable (%) (t >t+1)	88	9.6	3.2	5	7.2	11	19
Professional multi becomes unavailable (%) (t >t+1)	88	3.6	1.6	1.5	2.6	4.3	8.6
Amateur minimum nights (mean)	89	4.5	1.1	2.7	3.6	5.4	6.1
Professional multi minimum nights (mean)	89	5.1	2.3	2.5	3.1	6.1	11

Note: own calculations and depiction; data sourced from Inside Airbnb, and variables comprise aggregated monthly counts of in-category observations if not stated otherwise.

4.3.2 Reviews datasets

From the *reviews datasets,* we computed one variable: *number of reviews* per month. Using date information for every review published on the Airbnb website, we computed an aggregate monthly count, which serves as a proxy measure for marketplace activity because displayed reviews also serve as a basic reference on the Airbnb marketplace, informing potential guests about hosts' past performance.[6] The summary statistics for this variable read: N: 97; mean: 41,106; min: 1,101; max: 77,948; std. dev.: 20,157.

4.4 Analytic Strategy and Methods

Implementing our analytic strategy, we utilized publicly available information to describe the case and find information on the mechanisms relating to collapse, displacement, and drift. In a second step, we analyzed the platform interface data using appropriate variables for exhaustion, layering, and conversion. Continuity served as an empirical reference for our interpretation. In a third step, we engaged with potentially segmented changes across listings of amateur and professional hosts, comparing values for amateur listings with professional listings.

[6] We excluded all automated messages (about 2 percent of observations) that merely reported the cancellation by host or guests and removed duplicate review records from the historical data. Not every booking received a review; however, Airbnb reported numbers, and other estimations assumed a review rate of around 50% per stay.

To uncover changes and continuity across time in the platform interface datasets statistically, we used the R-package *strucchange*, which tests for structural change in linear regression models (Zeileis et al., 2002). By modelling the relationship between a given variable and time as a simple linear regression, a continuous linear trend should account for a continuous trajectory even across normal fluctuations. However, substantial changes should exhibit a discontinuous trajectory, breaking with a linear trend. In case of breaks, the R package computes one or more breakpoints that separate linear trends, indicating segments of development trajectories of the given variable across time.

More specifically, the R-package *strucchange* computes several solutions with an ascending number of break points with the corresponding dates of the estimated breaks. The package discerns the optimal number of breaks for the given observations comparing the BIC values of the solutions and selecting the solution with the lowest BIC value. We used a default h-value of 0.15, denoting the minimal segment size as a fraction relative to the sample size.

5. Results

5.1 Results from the publicly available information on collapse, displacement, and drift

Most of the information we gathered on Airbnb in London indicated attempts to provide continuity in the face of societal turmoil and uncertainty (see Subsection 5.2.3). From the publicly available information, we clearly can rule out an Airbnb collapse (in London), as the platform's operations continued. We also found no evidence of substantial displacement, as the platform's rules and listings did not change substantially toward an alternative logic of action, e.g., another type of service or mode of profit. Furthermore, we found no publicly available information that would support a drift in which the platform organization tolerated a systematic shift toward rule-breaking behavior by established Airbnb users. We understand that changes in these three types must come with some level of public attention and recognition, with Airbnb eventually announcing substantial changes to inform potential guests publicly.

5.2 Results from platform interface data

Continuing our analysis beyond the publicly available information, our second step uses the variables in the platform interface data to ascertain the remaining variants of change.

5.2.1 Exhaustion and Layering

In considering *exhaustion*, Figure 2 reveals a massive decline in the monthly number of reviews, indicating a sudden and substantial guest-sided depletion of the Airbnb marketplace taking place around February 2020, when the COVID-19 crisis took hold with lockdowns and travel restrictions. Exhibiting the usual seasonal variations throughout, the number of reviews slowly rose from bottom level, increasing substantially only after March 2022. In 2022, reviews returned to 2017 levels, then again rose in 2023 to levels close to the ones in 2018.

Contrary to the massive guest-sided depletion, Figure 3 reveals a slightly delayed shift in March 2020, when a decline in total and available listings began, as well as a moderate increase in the count of unavailable listings. This decline continued until early 2022, when available listings and, a bit later, the total number of listings started to steadily increase. Clearly, the market's host side mirrored the massive drop on the guest side. However, depletion on the host side exhibited a much less dramatic pattern, as the number of available listings did not drop to near-bottom levels, and many listings continued to be available, while some left and only a few more became unavailable.

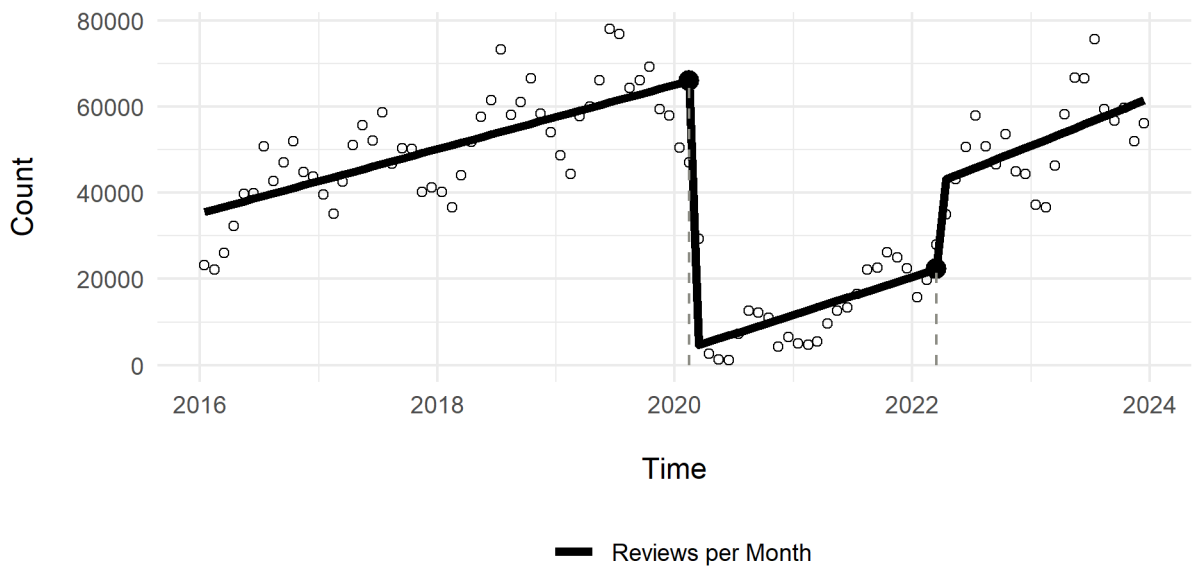

Fig. II: Reviews across time (aggregated total monthly values). Note: own calculations and depiction; data sourced from Inside Airbnb review dataset with aggregated monthly data, fitted values (line), and calculated break dates (point on vertical line): (2020-02-15, 2022-03-15)

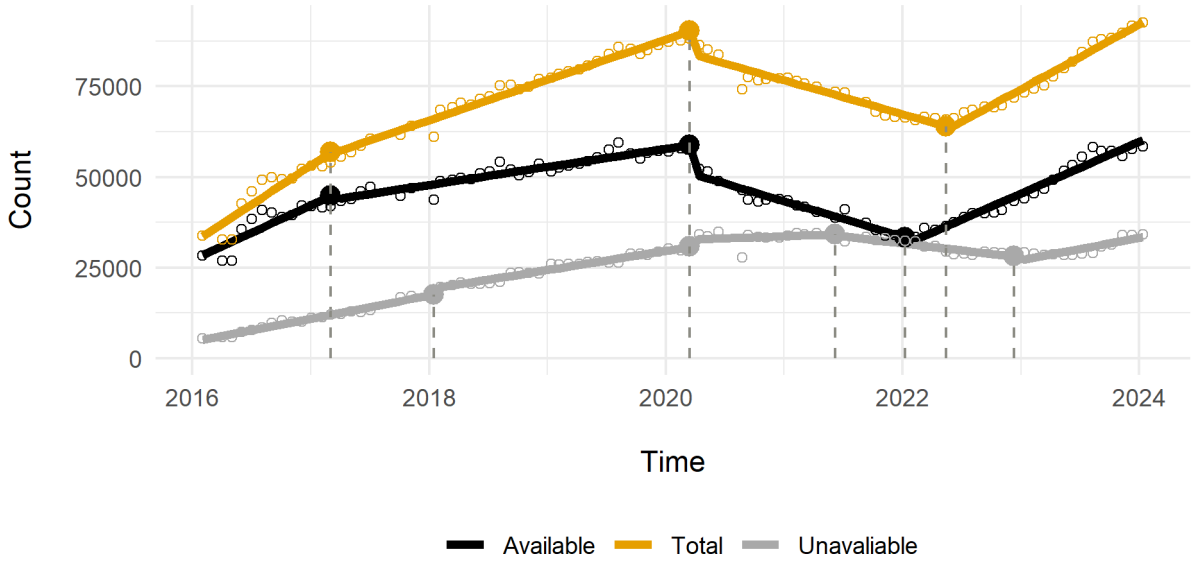

Fig. lll: Available, total listings and unavailable across time. Note: own calculations and depiction; data sourced from Inside Airbnb listing-dataset with monthly data, fitted values (line), and calculated break dates (point on vertical line): (2017-03-04, 2020-03-15, 2022-01-09) (2017-03-04, 2020-03-15, 2022-05-15) (2018-01-15, 2020-03-15, 2021-06-07, 2022-12-10)

The notable decline in the total number of listings drew attention to entries and exits (see Figure 4). The *strucchange* package routines computed only one breakpoint in March 2020. Before COVID-19, the number of entries travelled on a slightly descending slope, continuously exceeding exit levels and resulting in marketplace growth. The trend for exits increased over time, with a drop in March 2020, coinciding with a much larger drop in entries. After March 2022, exits and entries started to slowly rise again. Exits steadily returned to pre-COVID levels, and entries ascended from the bottom to surpass exits in mid-2022, leading to a recovery in the marketplace.

Overall, during non-crisis times, the marketplace grows, as a regular portion of listings leaves and a slightly higher share of new listings enters. The COVID-19 crisis disrupted this normal recuperation, effectively freezing both entries and exits. In turn, our results do not indicate an *exhaustion* due to exits. On the contrary, exits and, therefore, exhaustion seemed to be paused by the COVID crisis. Conversely, the steep decline and slow rise of entries that Figure 4 reports do not indicate that a substantial layering process took place because entry levels are too low to shift the overall composition.

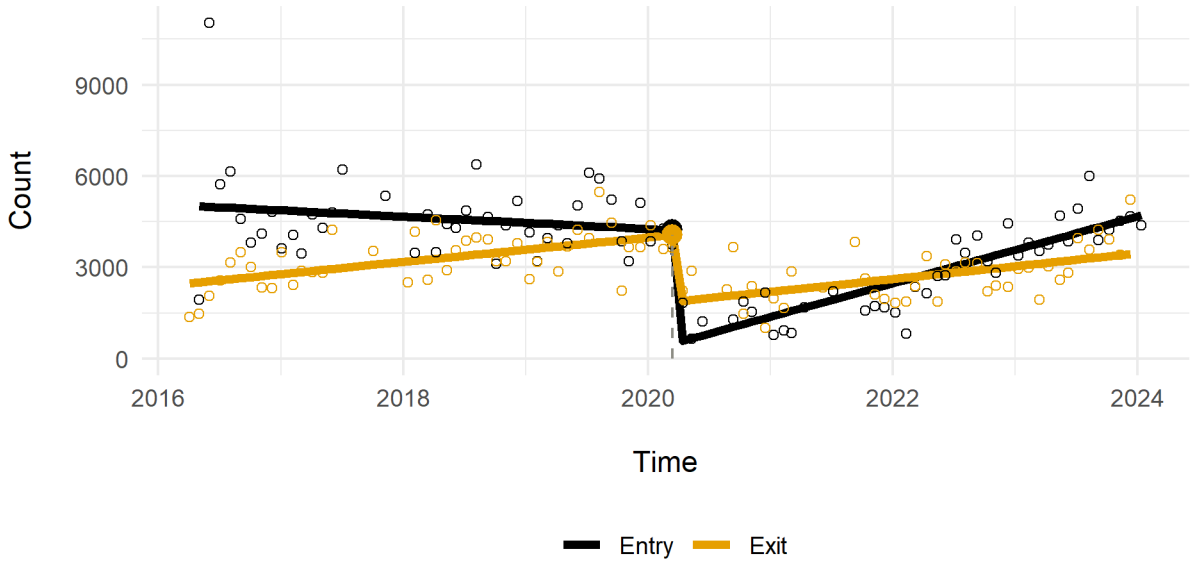

Fig. IV: Entries and exits across time (scraping gaps excluded). Note: own calculations and depiction; data sourced from Inside Airbnb listing-dataset with monthly data, fitted values (line), and calculated break dates (point on vertical line): (2020-03-15) (2020-03-15)

5.2.2 Conversion

Our remaining empirical analysis considered the possibility of conversion, with established listings used for new purposes. Following the literature, we considered repurposing between amateur listings and professional multi listings, as well as adaptation of minimum nights potentially breaking with the core logic of short-term rental.

Figure 5 reveals amateur and professional multi listings' relative salience. Overall, the developments resemble the trajectory of the whole marketplace (see Figure 3 above). Professional multi listings dominate the marketplace, with amateur listings clearly taking a secondary role throughout. The COVID-19 drop in 2020 occurred simultaneously for both listing types. In absolute numbers, the drop was more pronounced for professional multi listings, in part owing to their numerical dominance. We did not observe a conversion in terms of raising salience with amateur listings.

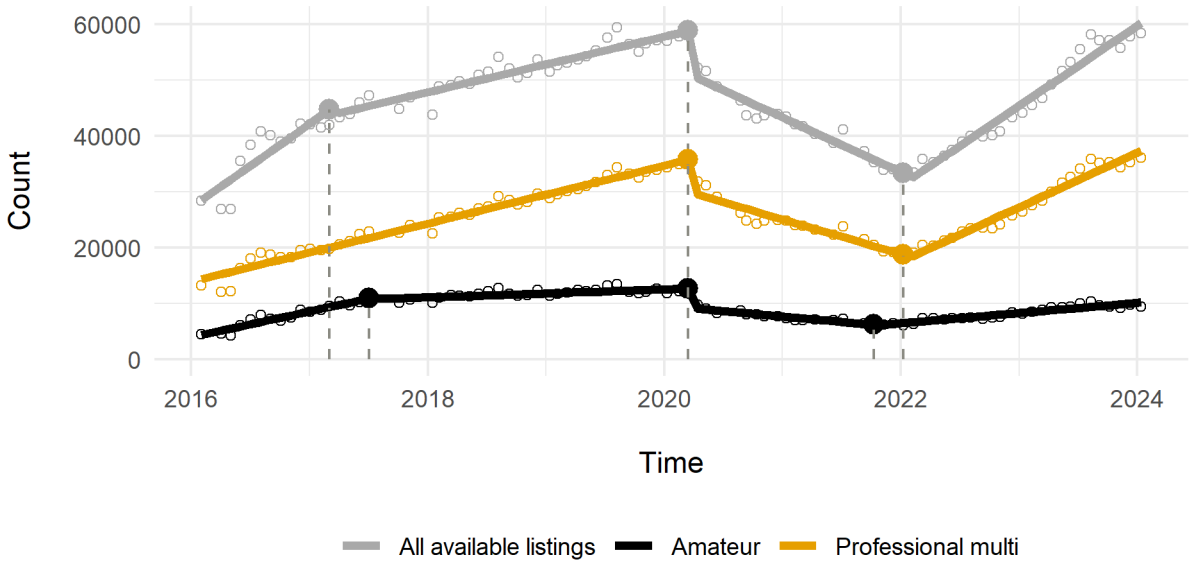

Fig. V: Listing types (amateur vs. professional multi) and all available listings across time. Note: own calculations and depiction; data sourced from Inside Airbnb listing-dataset with monthly data, fitted values (line), and calculated break dates (point on vertical line): (2017-07-04, 2020-03-15, 2021-10-10) (2017-03-04, 2020-03-15, 2022-01-09) (2020-03-15, 2022-01-09)

Established listings may change their key characteristics when faced with tumultuous environments, and Figure 6 reports on whether listings switch between being amateur or professional multi listings.[7] The results depict the percentages of listings that are of a certain type during the period (t) and did not change during the following period (t+1). The linear trend for professional multi listings reveals that throughout the whole observation period, more than 85 percent of listings did not change their listing type, e.g., to amateur or become unavailable. The revelation that the procedures computed no breaking points indicates that this pattern did not change systematically with the COVID-19 crisis. Instead, the results indicate that fluctuation events took place before, during, and after 2020. For amateur listings, the results point in a similar direction, albeit exhibiting a smaller share, with 70 to 80 percent listings remaining of that type, normal fluctuations, and a linear trend throughout. These findings suggest that no systematic conversion occurred.

[7] Technically, listings can change to each type, as well as to the category "unavailable," and the intermediate listing type "professional single" (not reported in the figures).

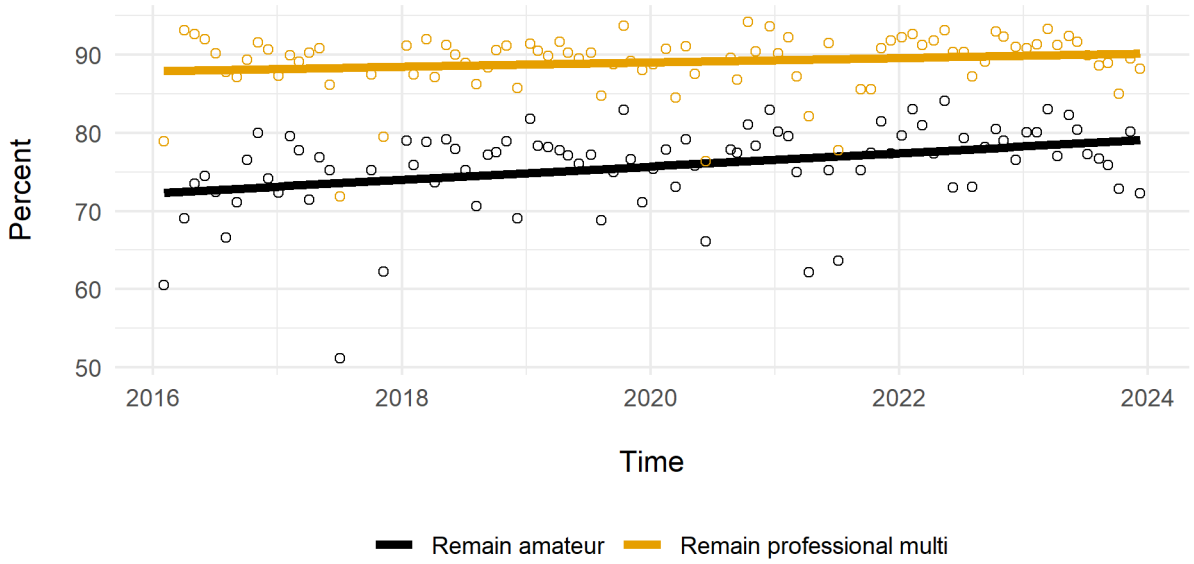

Fig. VI: Remaining (t > t+1) a certain listing type (amateur vs. professional multi). Note: own calculations and depiction; data sourced from Inside Airbnb listing-dataset with monthly data, fitted values (line), no break dates calculated, and linear regression results depicted.

For the remaining key characteristic, *minimum nights*, Figure 7 presents the mean and median values across time. The mean number of minimum nights already fluctuated before 2020 and then plateaued at a slightly higher level. After February 2020 average minimum nights steadily increased, reaching a peak in summer 2022, when values suddenly dropped and begin to decrease steadily while remaining on an elevated post-COVID level. As for the median, only two outliers in 2022 interrupted an otherwise linear trend. The divergent trend patterns of mean and median indicated an increasingly skewed distribution in which a few listings increased the minimum nights to higher mean values, whereas many listings did not change this key characteristic. This result indicates a conversion from short-term to longer-duration listings. This conversion was driven by a subsegment in the marketplace that systematically increased the minimum number of nights.

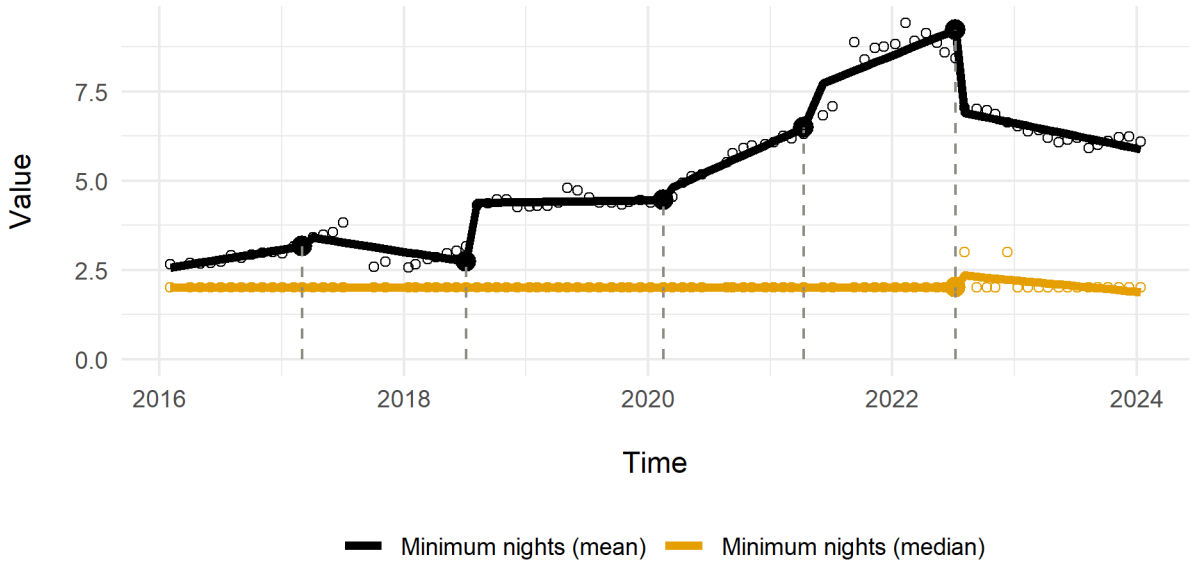

Fig. VII: Minimum nights (mean and median) across time. Note: own calculations and depiction; data sourced from Inside Airbnb listing-dataset with monthly data, fitted values (line), and calculated break dates (point on vertical line): (2017-03-04, 2018-07-07, 2020-02-16, 2021-04-11, 2022-07-09) (2022-07-09)-

5.2.3 Continuity

In light of the reported results, we now turn to continuity as our empirical reference. Whereas some aspects that we investigated exhibited instances of change, we also found that a substantial share of established listings and their characteristics remained unchanged. As for platform continuity, the COVID-19 crisis revealed some important features that remain covert in Airbnb's daily operations. We can contextualize these with our observations and publicly available information. Extant studies have reported that guests and hosts started to cancel upcoming bookings at the time of the COVID-19 outbreak (Farmaki et al., 2020; Boros et al., 2020). Airbnb reacted with an extenuating-circumstances policy (Airbnb, 2020a). Airbnb also continually adapted its health and safety program (e.g., Airbnb 2021), and introduced features such as search filters for flexible cancellation policies (Airbnb, 2020b). Furthermore, the general requirement for social distancing was reflected by an increased use of self-check-ins via key boxes. Hosts began to take more downtime between bookings, and physical contact was reduced to a minimum, as new cultural norms and behaviors were adopted (Fischer & Roelofsen, 2022; Miguel et al., 2022), with rules and activities adopted mainly to maintain the overall logic of action. This exemplifies continuity through maintenance activities involving adaptive changes by both the Airbnb platform company and hosts.

5.3 Results from platform interface data on amateur and professional listings

In the third and final step in our analysis, we turn to the expected differences between amateur and professional listings during the COVID-19 crisis. Our analysis above indicated the presence of exhaustion and conversion, so we computed more results that account for segmented effects across amateur and professional multi listings.

As for exhaustion, we focused on exits and computed the percentages of exits exclusively for amateur listings and for professional multi listings. The results, presented in Figure 8, indicate no systematic difference between the exits from amateur or professional multi listings. The share of exit listings declined in both groups, although substantial fluctuations occurred before and after 2020.

Regarding listings' unavailability, Figure 9 reveals a linear, slightly declining trend for amateur listings and a slightly increasing trend for professional multi listings, with only one breaking point around October 2021. These findings complete the picture that already emerged in Figure 6 that listings tended to remain of a certain type, with 10 percent of amateur listings becoming unavailable, compared with only 5 percent of professional multi listings. Taken together, our results on exits and unavailability did not indicate substantially segmented exhaustion across the two listing types.

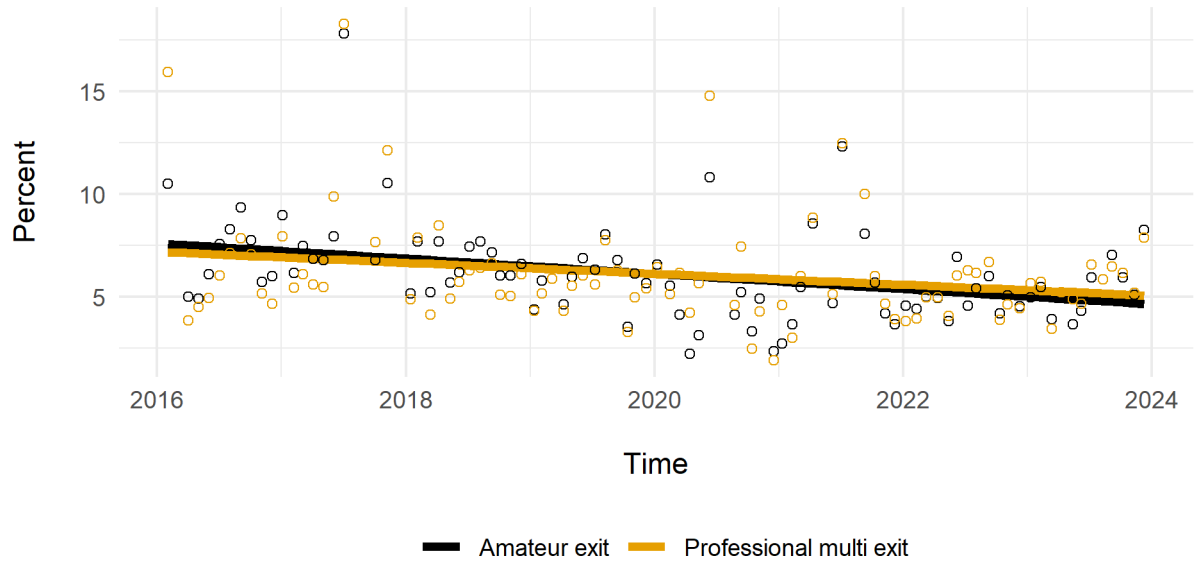

Fig. VIII: Exits across amateur and professional multi listings (percentages). Note: own calculations and depiction; data sourced from Inside Airbnb listing-dataset with monthly data, fitted values (line) linear regression, and no break dates computed.

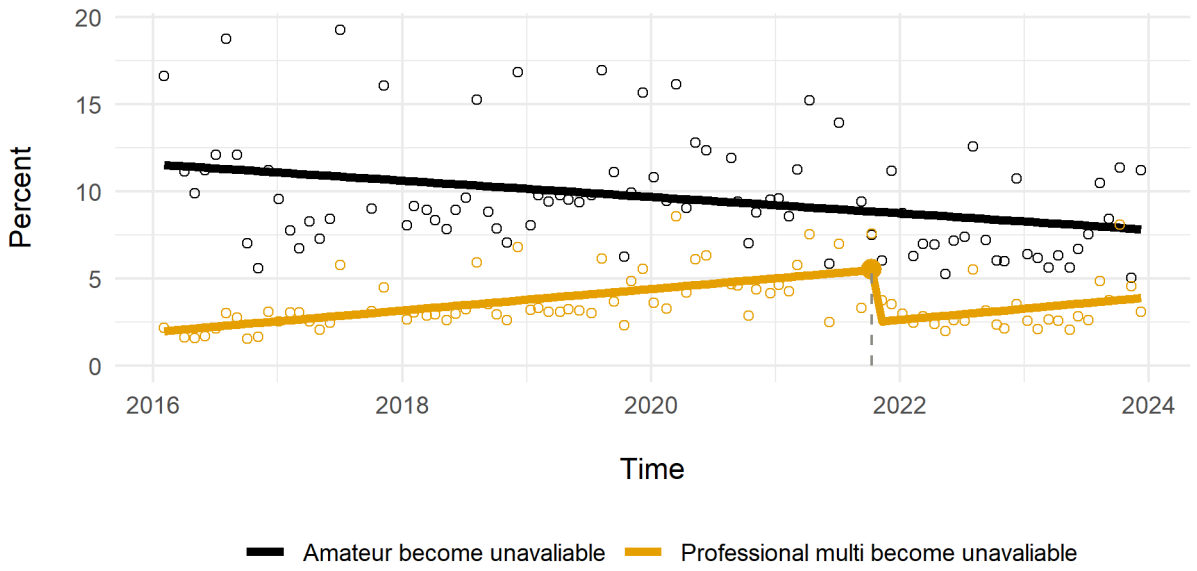

Fig. IX: Becoming unavailable (t > t+1) across amateur and professional multi listings. Note: own calculations and depiction; data sourced from Inside Airbnb listing-dataset with monthly data, fitted values (line), and calculated break dates (point on vertical line): (no break dates computed; linear regression displayed) (2021-10-10).

As for *conversion*, we considered systematic differences between amateur and professional multi listings in respect to increased minimum nights. The results in Figure 10 indicate a temporary divergence between the two listing types. Whereas the mean minimum nights steadily increased and plateaued for amateurs during 2021 and 2022, the professional multi listings followed suit, but increased minimum nights substantially from April 2021 onward. Thus, the spike revealed in Figure 7 above appears to have been driven by the professional segment of the Airbnb marketplace. With the drop to similar levels in July 2022, this segmented conversion remains temporary. Building on the findings above (see Figure 5), we found no substantial evidence for a systematic conversion across amateur and professional multi listings.

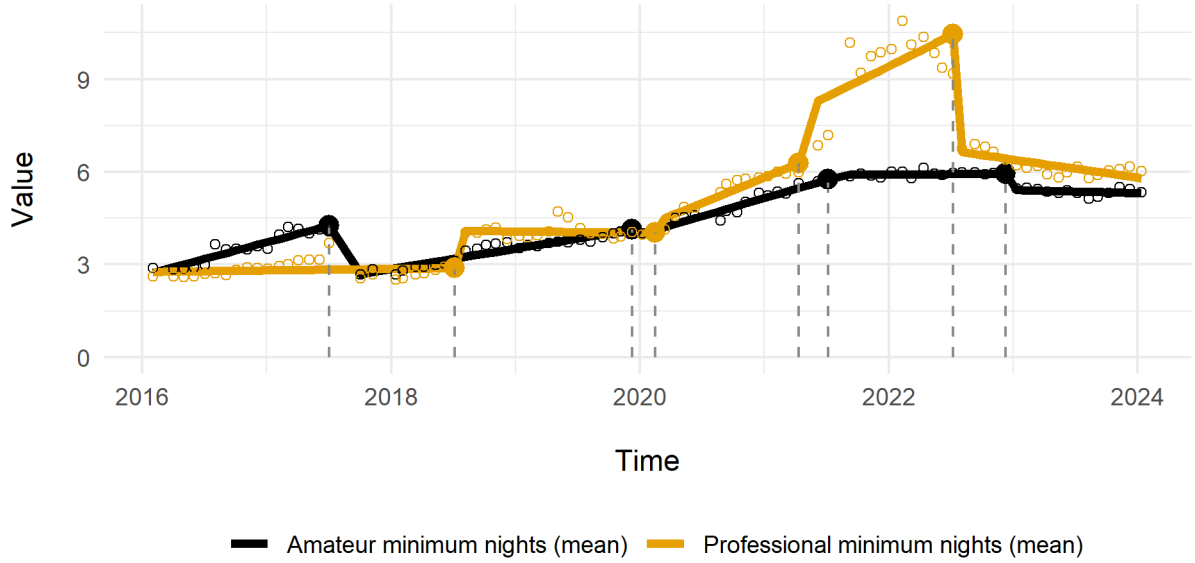

Fig. X: Minimum nights (mean) across amateur and professional multi listings. Note: own calculations and depiction; data sourced from Inside Airbnb listing-dataset with monthly data, fitted values (line), and calculated break dates (point on vertical line): (2017-07-04, 2019-12-09, 2021-07-06, 2022-12-10) (2018-07-07, 2020-02-16, 2021-04-11, 2022-07-09).

6. Discussion and conclusion

This paper offers a new framework for analyzing various mechanisms of continuity and change on digital platforms. We used this framework to theorize on the types of continuity and change in Airbnb listings and investigated these dynamics in the case of Airbnb in London before, during, and after the COVID-19 crisis. Furthermore, we tested whether types of continuity and change differed across amateur and professional listings. By applying a comprehensive sociological framework of platform change, we found that the Airbnb platform primarily exhibited patterns of continuity and incremental change, rather than collapse or more substantial transformations. While the guest side of the platform experienced massive exhaustion due to COVID-19-related restrictions, the host side demonstrated resilience through adaptive maintenance, with minimal exits and a marked reduction in new entries. This dynamic preserved the core logic of platform operations. However, we observed evidence of conversion, particularly in the increase in minimum nights per stay, which was driven by professional listings. With this empirical analysis, we demonstrated the usefulness of a broader conceptual framework describing the change and continuity of digital platforms from a social order perspective.

In this paper, we developed a comprehensive theoretical framework that provides a nuanced perspective on stability and change, building on and contrasting the literature on Airbnb as a central case in digital platform research. Empirically, our findings indicate that collapse, displacement, and drift did not occur during the observation period. Airbnb in London continued its operations without dramatic rule changes that would have facilitated an alternative logic of action, and the crisis did not systematically lead to widespread rule-breaking or a failure of rule

enforcement by Airbnb. However, while these types of change were absent, their inclusion in our framework enabled a more holistic analysis of the case and provided the basis for meaningful comparisons across platforms and contexts.

First, we found empirical evidence of significant exhaustion on the platform's guest side. The onset of the COVID-19 crisis in 2020 led to a near-total collapse of transactions in the marketplace, followed by a slow and gradual recovery. While theoretical perspectives might suggest that the host side would mirror this guest-side exhaustion, our findings revealed a more complex dynamic. During the initial months of the crisis, overall availability declined, but no mass exodus of hosts occurred. Instead, the number of host exits dropped, retaining listings that might have been withdrawn under normal conditions. Simultaneously, new entries declined even more sharply, disrupting the regular turnover that typically sustains marketplace growth. This lack of regular platform recuperation by entries explains the decline in total number of listings, despite the absence of large-scale host withdrawals. The observed decline in entries effectively ruled out layering as a salient type of change, as it relies on the growth of user groups adhering to previously nondominant logics of action. Instead, we found some evidence of conversion. While types of listings largely remained stable, we identified a notable shift from short-term rental orientations toward longer stays. During the COVID-19 crisis, the average minimum nights required for a booking steadily increased from approximately three days to at least eight. Although this trend reversed somewhat after the crisis, the minimum nights did not return to pre-COVID levels, suggesting a moderate, yet persistent, form of conversion.

Beyond exhaustion and conversion, our findings revealed that continuity emerged as the dominant dynamic characterizing Airbnb in London during the COVID-19 pandemic. Contrary to some conceptualizations in the literature, we concluded that Airbnb and its hosts implemented adaptive changes that maintained the platform's existing logic of action, rather than fundamentally altering it, to navigate the external shocks and uncertainties of the crisis. Moreover, contrary to some expectations grounded in the dynamic of increasing returns, the host side of the marketplace experienced a pause, with both exits and entries declining. This apparent "freezing" of activity, likely driven by the situation's uncertainty, suggests that Airbnb and its hosts collectively deferred significant action, anticipating a more favorable future. This pause may also reflect the limited availability of alternative market opportunities for hosts during the crisis, such as selling properties or converting them to regular long-term rentals. These platform-external conditions helped prevent a collapse of network effects and the platform's decline due to decreasing returns. Ultimately, the downward spiral of diminishing demand and supply triggered by the severe guest-side exhaustion was mitigated as Airbnb and its hosts introduced adaptive measures while maintaining existing listings on the platform.

Contrary to several salient contributions in the Airbnb debate, our London case study provides only limited evidence to support the theorized differences between amateur and professional listings. Overall, continuity dominated across the various theorized types of change, leaving little room for significant shifts within the platform's subsegments. Contrary to expectations, our findings do not suggest that the COVID-19 crisis forced professional hosts out of the London market, thereby enabling amateurs to take over and enact the sharing economy ideal. Two years after government restrictions were lifted, professional hosts continued to dominate Airbnb

in London. The only notable difference observed between the two user groups was an instance of conversion, in which professional hosts increased the minimum nights required for bookings more substantially than their amateur counterparts. This divergence created a temporary rift between the two listing types, which emerged and dissipated within a 12-month period.

Overall, our findings highlight that much of the continuity and change observed on digital platforms such as Airbnb can be explained effectively by treating them as rule-based social orders. Compared with approaches that emphasize the power of platform organizations (decision view) or the adaptability afforded by digital infrastructures (flexibility view), a social order perspective—focusing on rules and institutionalized logics of action—provides a robust explanation for the high degree of continuity observed despite the external shocks and prolonged disruptions caused by the COVID-19 pandemic. Similarly, this perspective offers a more nuanced understanding than approaches focused on increasing returns, lock-in effects, and rare instances of sudden collapse (path dependence view). Our approach equips researchers with a comprehensive tool kit to detect incremental changes driven by the interplay between formal rules and their practical enactment. In essence, viewing platforms as social orders with distinct institutional foundations explains why they evolve in more varied and incremental ways than suggested by models that focus solely on organizational power, technological adaptability, or economic interactions among platform users.

Our comprehensive framework applied a general theory of institutional change (Streeck & Thelen, 2005) to the specific kind of social order characterizing digital platforms (Ametowobla & Kirchner, 2023). This framework was broad enough to encompass various types of platforms (e.g., transaction, innovation, or communication platforms) while being specific enough to distinguish between five mechanisms of incremental change situated among the extremes of complete stability and sudden collapse. In this paper, we demonstrated the framework through a single case study, presenting a detailed analysis that highlights the presence of nuanced mechanisms, such as conversion, while providing evidence against others. While the framework proves highly effective for single-case analysis, its true strength lies in its potential to facilitate structured comparisons across cases. Future research could leverage this methodology to examine the evolution of Airbnb across different periods and locations, or to investigate the varying impacts of crises on different platform types. We also see significant potential for extending the approach by including interactions between change types across time. For example, layering parts of the platform initially may be elicited through adaptive changes or displacement through defection (e.g., as existing interfaces change) and subsequently lead to differential growth between user groups that follow divergent logics of action.

Future studies also should elaborate further on the specifics of digital platforms' social order and their effects on outlined mechanisms or possible others. For instance, platforms tend to grow in complexity by adding and combining functionalities and interfaces for evermore groups of users and complementors (Helmond, 2015), suggesting a complex interplay among change mechanisms on the same platform. Furthermore, many large tech organizations now orchestrate their users' activities across multiple platform and nonplatform offerings, raising the question of how to characterize the resulting compound social orders (Jacobides et al., 2018). Finally, tension has been increasing between platform organizations and states, as both act as

rule makers aiming to regulate similar areas of social activity and interaction (van Dijck et al., 2018). Thus, more work is needed on the nesting and (dis-)embedding of various kinds of social orders.

Considering our findings in the context of the refiguration-of-space approach (Knoblauch & Löw, 2017), we provide empirical evidence of actual patterns of change and continuity of Airbnb under COVID conditions as a network space. Initially, territorially imposed travel restrictions impacted the spatial arrangement as demand for accommodations plummeted. The contradiction between the spatial logic of the territory that imposed travel restrictions and the logic of Airbnb's network space became acutely apparent. As for network space, the imposition of territorial restrictions threatened survival, overriding the very logic on which the network space builds. In this sense, our findings support Löw and Knoblauch (2020) that COVID exposed social interactions' materiality and relationality, thereby temporarily intensifying the tension between state-controlled, territorially bounded orders and global networks' dynamic, boundless nature. Like a magnifying glass, the pandemic situation unveiled the taken-for-granted patterns of the network space while also revealing its otherwise often latent contradictions with territorially bound orders and endowed state authorities.

However, Airbnb's resilience and recovery in London highlights the importance of considering temporal trajectories that spatial arrangements as institutionalized regimes can go through. While our results indicate that changes in Airbnb's network space took place, they also spotlight the particularities of the pandemic situation as a "state of emergency" for state authorities and regular actors. During the declared state of emergency, Airbnb's network space practically froze, and little change took places as actors collectively were waiting for the situation to pass with only limited alternatives at their disposal. Following the state of emergency, the logic of network spaces experienced a revitalization, with actors on the platform trying to revive pre-pandemic routines. This holds true with some exemptions in which the COVID crisis shifted aspects of Airbnb's network space and facilitated adaptations.

Whereas COVID clearly exemplified social interactions' inherent materiality and the tension between state-controlled, territorially bounded order and global networks' dynamic nature, our analysis highlighted the importance of considering network spaces as regimes. In this case, Airbnb's dynamics provided a great example of the temporal dimension of what elsewhere has been called a regime or spatially bound regime (Anong Biaback et al., forthcoming; Kirchner & Baur, forthcoming) because it highlights the various conceptual and empirical ways in which regimes, like digital platforms and their network spaces, can and do change. The COVID-imposed threat to Airbnb's survival clearly resulted from a fundamental contraction between the logics of territorial and network spaces. However, considering the development trajectory reveals the resilience of the networks space logic even in the face of an existential crisis. In the case of Airbnb, this resulted in a successful attempt to revitalize an established spatial logic and recover from crisis. Airbnb's survival and recovery demonstrates how established, spatially rooted social orders, such as Airbnb's digital marketplace, can go through stages with actors engaged in maintaining and continuing activities bound to a particular spatial logic.

Thus, our perspective offers a basis for conceptualizations of regimes or spatially bound regimes (Anong Biaback et al., forthcoming; Kirchner & Baur, forthcoming) and how they can and do change, other than Airbnb's network space. Furthermore, our types of change and their general underlying mechanisms can prove to be highly relevant for many other instances because change in many other spatially bound regimes might very well exhibit continuity, drift, conversion, layering, displacement, exhaustion and/or collapse as well. For example, under conditions of conflicting spatial logics, as in our case with Airbnb during the COVID crisis, actors can engage with spatially bound regimes that they face and adhere to, attempting to navigate or adapt established orders. Thus, employing conceptualizations of institutional change that we adopted for the specific case of Airbnb can provide a general concept with which to relate and compare developments among many other kinds of spatially bound regimes.

This article presents a novel framework for analyzing how platforms evolve and adapt to changing environments. By integrating a general theory of institutional change with the concept of platforms as social orders, our framework identifies five mechanisms of change situated between the extremes of hyper-stability and collapse. Applying this framework to Airbnb in London during and after the COVID-19 crisis reveals that the platform underwent incremental changes, challenging existing theories that often focus on isolated aspects of platform-based social orders. Our comprehensive framework and methodology provide a solid foundation for future comparative research on the dynamics of digital platforms across varying contexts, adding to the literature on the refiguration of space in times of crisis.

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Technische Universität Berlin
SFB 1265
mail info@sfb1265.tu-berlin.de
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