

Conditional Endurance: A Multilevel Coordination Perspective of Imprint Durability and Innovation

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ABSTRACT

Purpose: This study develops a multilevel process theory explaining how historically encoded organizational imprints endure under conditions of change. While imprinting research has examined formation, fit, and transformation, the mechanisms underlying long-term durability remain under-specified. The paper introduces a coordination-based framework of conditional imprint endurance.

Methodology/Approach: The study employs integrative theory building grounded in multilevel imprinting research, institutional theory, and recent work on sedimentation and strategic reprioritization. Through conceptual synthesis, it specifies synchronization, desynchronization, and realignment as core constructs. The framework is formalized through five propositions.

Findings: Imprint durability depends on cross-level synchronization among interpretive, structural, and institutional carriers. Destabilization produces desynchronization, which amplifies susceptibility during sensitive periods. Endurance is achieved when realignment restores coordination; repeated successful realignment builds endurance capacity.

Practical Implications: The framework clarifies how organizations can preserve historically grounded identities while adapting to environmental turbulence. It highlights the importance of coordinated recalibration rather than isolated structural change. Managers should focus on restoring cross-level alignment rather than pursuing symbolic or fragmented adjustments.

Originality: The study advances imprinting theory by shifting the focus from formation and fit to conditional endurance. It distinguishes durability from performance and path-dependent lock-in. By specifying coordination as the structural mechanism of persistence, the paper introduces a new research agenda within imprinting scholarship.

Keywords: Imprinting theory, organizational endurance, multilevel coordination, sensitive periods, innovation and renewal

JEL Codes: M10, M19, L20

Koşullu Süreklilik: Damga Etkilerinin Kalıcılığı ve İnovasyon Süreçlerine İlişkin Çok Düzeyli Bir Eşgüdüm Perspektifi

ÖZ

Amaç: Bu çalışma, tarihsel olarak kodlanmış örgütsel izlerin değişim koşulları altında nasıl sürdürüldüğünü açıklayan çok düzeyli bir süreç teorisi geliştirmektedir. Örgütsel damgalama literatürü oluşum, uyum ve dönüşüm süreçlerini incelemiş olsa da uzun dönemli sürekliliğin mekanizmaları yeterince açıklanmamıştır. Bu makale, koşullu damgalama sürekliliğine dayalı bir eşgüdüm çerçevesi önermektedir.

Yöntem: Çalışma, çok düzeyli damgalama literatürü, kurumsal teori ve yeniden önceliklendirme çalışmalarını bütünleştiren kavramsal bir teori geliştirme yaklaşımı kullanmaktadır. Senkroni-

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zasyon, desenkronizasyon ve yeniden hizalanma temel kavramlar olarak tanımlanmıştır. Çerçeve beş önerme ile formüle edilmiştir.

Bulgular: İzlerin/ damgaların sürekliliği, yorumlayıcı, yapısal ve kurumsal taşıyıcılar arasındaki senkronizasyona bağlıdır. İstikrarsızlaşma desenkronizasyona yol açmakta ve hassas dönemlerde kırılabilirliği artırmaktadır. Yeniden hizalanma eşgüdümü yeniden sağladığında süreklilik mümkün olmakta; tekrar eden başarılı hizalanmalar dayanıklılık kapasitesini güçlendirmektedir.

Sonuç ve Öneriler: Çerçeve, örgütlerin tarihsel kimliklerini korurken çevresel türbülansa nasıl uyum sağlayabileceğini açıklamaktadır. İz sürekliliği için sembolik değişimden ziyade düzeyler arası eşgüdümün önemi vurgulanmaktadır. Yöneticiler günlük müdahaleler yerine hizalanmış yeniden kalibrasyona odaklanmalıdır.

Özgünlük: Bu çalışma, örgütsel damgalama literatüründe oluşum ve uyumdan sürekliliğe yönelen yeni bir teorik bakış açısı sunmaktadır. Sürekliliği performans ya da kilitlenme ile eşitlememektedir. Eşgüdümü yapısal bir mekanizma olarak tanımlayarak literatüre özgün bir katkı sağlamaktadır.

Anahtar Kelimeler: Damgalama teorisi, örgütsel dayanıklılık, çok düzeyli koordinasyon, hassas dönemler, yenilik ve yenilenme

JEL Sınıflandırması: M10, M19, L20

Introduction

Imprinting theory explains how conditions encountered during sensitive periods leave lasting marks on organizational structures, strategies, and identities (Stinchcombe, 1965; Marquis & Tilcsik, 2013). Over the past decade, research has demonstrated that imprints extend beyond founding moments, accumulate through sedimentation, and evolve under institutional turbulence (Simsek et al., 2015; De Cuyper et al., 2020; Wang et al., 2019). At the same time, innovation and entrepreneurship scholarship has shown that historically embedded orientations can both constrain and enable strategic renewal (De Massi et al., 2016; Erdogan et al., 2019; Gusenbauer et al., 2023). These advances collectively raise a central question: how do historically encoded organizational configurations remain coherent under conditions of change?

Existing research has examined when imprints enhance performance through environmental fit (Kriauciunas & Shinkle, 2008; Tilcsik, 2014), how actors reprioritize historically rooted commitments (Sinha et al., 2020), and how layered imprints accumulate across time (De Cuyper et al., 2020). Yet the mechanisms through which imprints endure, particularly under repeated destabilization, remain under-specified. Persistence is often treated as either structural embedding or inertial continuation, while transformation is examined as reinterpretation or adaptation. What remains insufficiently theorized is how imprint configurations remain coherent across interpretive, structural, and institutional domains as environments shift.

This gap is particularly salient in contexts characterized by recurring disruption, including leadership succession, technological transition, ideological contestation, and regulatory reform (Han & Zheng, 2019; Marquis & Qiao, 2020). Organizations frequently face multiple destabilization episodes across their life course. In such settings, endurance cannot be equated with immobility, nor can it be reduced to performance fit. An organization may remain historically coherent yet perform poorly under misalignment; conversely, it may adapt strategically while losing interpretive or institutional coherence. The durability of historically encoded configurations therefore requires explanation beyond formation and fit.

This article develops a multilevel process theory of conditional imprint endurance. We argue that imprint durability depends on cross-level synchronization among three carriers: interpretive schemas embedded at the individual level, structural enactments embedded at the organizational level, and evaluative templates embedded at the institutional level (Marquis & Tilcsik, 2013). Imprints persist when these carriers mutually reinforce one another. Destabilization disrupts this reinforcement, producing desynchronization. Desynchronization heightens susceptibility during sensitive periods, amplifying the influence of shocks on imprint trajectories. Here, we refer to susceptibility as to the degree to which a historically encoded imprint configuration becomes open to reinterpretation or modification under destabilization. It increases when cross-level reinforcement weakens, reducing the constraints that normally stabilize reproduction and making imprint trajectories more sensitive to change.

Thus, endurance depends on whether realignment restores cross-level coordination. When alignment is reconstituted, imprint trajectories stabilize or transform coherently; when coordination fails, configurations fragment or erode. Repeated successful realignment builds endurance capacity, strengthening the organization's ability to restore synchronization across successive cycles.

Thus, endurance depends on whether realignment restores cross-level coordination. When alignment is reconstituted, imprint trajectories stabilize or transform coherently; when coordination fails, configurations fragment or erode (Simsek, Fox, & Heavey, 2015). Because imprints are distributed across levels, durable restoration requires renewed alignment among interpretive, structural, and institutional carriers (Marquis & Tilcsik, 2013). Over time, repeated successful realignment builds endurance capacity, strengthening the organization's ability to

restore synchronization across successive cycles and reinforcing layered imprint configurations (De Cuyper et al., 2020).

By specifying synchronization, desynchronization, and realignment as central constructs, this framework advances imprinting theory in three ways. First, it shifts analytical attention from formation and fit to endurance under dynamism. Second, it deepens multilevel imprinting by theorizing interaction among carriers rather than treating levels as parallel repositories of historical influence. Third, it distinguishes conditional endurance from path-dependent lock-in (Sydow et al., 2009) and from imprint–environment fit (Tilcsik, 2014), clarifying that durability is governed by cross-level coordination rather than increasing returns or environmental congruence alone.

The remainder of the article proceeds as follows. We first review the evolution of imprinting scholarship and identify the unresolved endurance problem. We then develop the coordination-based mechanism and formalize it through five propositions. Finally, we discuss theoretical contributions, boundary conditions, and implications for future research.

Literature Review

Imprinting theory originates in the proposition that environmental conditions encountered during sensitive periods exert durable influence on organizational structures and practices (Stinchcombe, 1965). Early formulations emphasized structural embedding: founding contexts shape initial organizational blueprints, which subsequently persist through institutionalization and inertia (Boeker, 1989; Hannan & Freeman, 1977). Persistence was largely attributed to the enduring consequences of early structural choices and the costs associated with reversal.

Subsequent scholarship extended imprinting beyond founding. Marquis (2003) demonstrated that network positions formed under specific local conditions persist over time, while Burton and Burton & Beckman (2007) showed how early hiring decisions imprint subsequent leadership trajectories. These studies shifted attention from simple structural inertia to historically embedded patterns reproduced through organizational processes. Marquis & Tilcsik (2013) synthesized this work into a multilevel theory, arguing that imprints are encoded across individuals, organizations, and institutional environments.

More recent research has introduced dynamism into imprinting theory. Simsek et al. (2015) proposed that imprints may undergo metamorphosis without full displacement, highlighting that persistence and transformation are not mutually exclusive. De Cuyper et al. (2020) further extended temporality by theorizing sedimentation: organizations accumulate layered imprints across successive periods, producing historically stratified configurations rather than singular founding marks. These advances complicate the persistence narrative by demonstrating that imprint configurations evolve rather than simply endure unchanged. In this study, sedimentation refers to the historical layering of imprint elements across successive periods such that earlier interpretive commitments, structural practices, and institutional validations remain embedded while new layers are added. We use the concept not simply to describe accumulation, but to explain how imprint configurations become progressively more complex and internally stratified over time. The aim of introducing sedimentation is to clarify why endurance becomes increasingly dependent on cross-level coordination: as layers accumulate, maintaining coherence requires active synchronization rather than passive persistence. Sedimentation thus helps explain why conditional realignment and coordination capacity become central to long-term imprint durability.

Parallel developments in strategic management and entrepreneurship have emphasized the ambivalent role of historically embedded orientations in innovation. Research on “innovation through tradition” shows that firms can leverage historically encoded knowledge bases to enable renewal rather than constrain it (De Massis et al., 2016). Studies of family firms demonstrate how founding imprints shape paradoxical tensions between continuity and change, influencing innovation trajectories (Erdogan et al., 2019; Kammerlander et al., 2015). These findings underscore that historically grounded configurations can both enable and restrict adaptation. However, they primarily address performance or innovation outcomes rather than the structural mechanisms through which historical coherence is maintained.

Another stream situates imprinting within institutional turbulence. Wang et al. (2019) show that ideological imprints persist conditionally depending on political consistency, while Han & Zheng (2019) demonstrate how institutional transitions reshape historically embedded commitments. Marquis & Qiao (2020) argue that history conditions but does not deterministically fix organizational

trajectories. These contributions collectively establish that imprint durability is contingent and context dependent.

Across these streams, imprinting scholarship has evolved from structural embedding to multilevel encoding, from static founding marks to sedimented layers, and from determinism to strategic reprioritization. The field now explains how imprints form, how they layer, how they align or misalign with changing environments, and how actors attempt to reinterpret them. What remains under-specified is the structural mechanism through which imprint configurations remain coherent across interpretive, structural, and institutional domains over time.

To account for endurance under recurring destabilization, imprinting theory must clarify how cross-level reinforcement operates beyond initial sensitive periods, how gradual misalignment accumulates, how destabilization becomes consequential, and how alignment is restored, or fails to be restored, across successive cycles. Addressing this coordination problem is essential for explaining why some historically encoded configurations remain coherent under turbulence while others fragment or erode.

Theoretical background / framework development

A Coordination-Based Process Theory of Conditional Imprint Endurance

Imprinting theory explains why historical conditions encountered during sensitive periods generate enduring organizational consequences (Stinchcombe, 1965; Marquis & Tilcsik, 2013). Yet endurance remains conceptually under-specified because imprinting research has often treated persistence as an outcome of early embedding, while recent work has increasingly shown that imprints transform, layer, and are strategically reprioritized (Simsek et al., 2015; De Cuyper et al., 2020; Sinha et al., 2020). The central challenge is not whether organizations carry traces of their past, but how historically encoded configurations remain coherent over time under changing conditions.

We address this challenge by advancing a coordination-based theory of conditional imprint endurance. The core claim is that durability is not explained by the strength of any single imprint element, but by the alignment among multiple carriers through which historical influence is reproduced. Imprints endure

when carriers mutually reinforce one another; they become vulnerable when that reinforcement weakens. This perspective is consistent with multilevel imprinting theory, which conceptualizes imprints as distributed across individuals, organizations, and institutional environments (Marquis & Tilcsik, 2013), but it extends that view by theorizing endurance as a dynamic property of cross-level coordination.

Imprint Carriers and Cross-Level Synchronization

We distinguish three analytically separable carriers of imprint reproduction. First, interpretive carriers operate at the individual level and consist of cognitive schemas, identity commitments, and inherited interpretive frames through which actors justify and make sense of historically rooted orientations (Tilcsik, 2014; Sinha et al., 2020). Second, structural carriers operate at the organizational level and include routines, governance arrangements, and resource allocation patterns that embed historical orientations in recurrent practices (Boeker, 1989; Burton & Beckman, 2007). Third, evaluative carriers operate at the institutional level and consist of field-level templates, legitimacy standards, and audience expectations that validate or sanction organizational commitments (Wang et al., 2019; Han & Zheng, 2019; Marquis & Qiao, 2020).

Synchronization refers to the alignment of these carriers at a given time such that they mutually reinforce the reproduction of a coherent imprint configuration. An imprint endures when interpretive commitments justify structural practices, structural practices enact interpretive commitments, and institutional supports validate both (Marquis & Tilcsik, 2013). Synchronization is therefore relational: it does not refer to the intensity of a single imprint feature, but to the degree of alignment among carriers. Research on imprint strength suggests that persistence depends on continuing reinforcement rather than historical depth alone (Tilcsik, 2014; Simsek et al., 2015). Similarly, studies of ideological imprinting show that institutional reinforcement is not automatic; it can be sustained, contested, or withdrawn as field conditions shift (Wang et al., 2019; Marquis & Qiao, 2020). Synchronization captures this joint reinforcement structure directly.

Destabilization and Cross-Level Desynchronization

Organizations rarely operate under permanently stable conditions. Destabilization may arise from exogenous institutional transitions, ideological shifts, or

regulatory reforms, or from endogenous processes such as leadership succession, governance restructuring, or strategic redirection (Han & Zheng, 2019; Wang et al., 2019; Marquis & Qiao, 2020; Burton & Beckman, 2007). Destabilization is consequential for endurance because it can alter one carrier without proportionately recalibrating others. Because interpretive, structural, and institutional carriers evolve through distinct mechanisms and at different rates, destabilizing events often generate uneven adjustment across levels (Marquis & Tilcsik, 2013; Simsek et al., 2015).

Desynchronization occurs when carriers no longer mutually reinforce one another. It may take the form of interpretive–structural divergence, where rhetorical commitments persist while practices drift; structural–institutional divergence, where routines remain stable as institutional validation erodes; or interpretive–institutional divergence, where internal commitments conflict with shifting field logics. In each case, cross-level reinforcement weakens, and the imprint configuration becomes less coherent. The crucial point is that desynchronization is not itself a trajectory outcome; it is a condition that alters the organization’s susceptibility to subsequent events.

Sensitive-Period Amplification and Imprint Malleability

Imprinting theory has long associated sensitive periods with heightened susceptibility at founding and transition moments (Marquis & Tilcsik, 2013). However, sensitivity can also re-emerge later when cross-level reinforcement erodes. Dynamic imprinting research shows that imprint strength is not constant; it fluctuates and may become destabilized under contestation (Simsek et al., 2015). Sedimentation increases historical layering and internal complexity, thereby raising the likelihood of contradiction across imprint elements when coordination weakens (De Cuyper et al., 2020). Reprioritization research further indicates that actors reinterpret historically rooted guideposts when coherence erodes, selectively amplifying or attenuating imprint elements (Sinha et al., 2020). Together, these insights suggest that desynchronization heightens susceptibility by weakening the constraints that otherwise stabilize reproduction.

We use the term imprint malleability to denote variation in the susceptibility of historically encoded configurations to reinterpretation and recalibration. Malleability does not imply that imprints disappear or become fully fluid; rather,

it captures the extent to which weakened cross-level reinforcement increases openness to reconfiguration. Research on dynamic imprinting suggests that imprint strength fluctuates over time and may become destabilized under conditions of contestation (Simsek et al., 2015). Desynchronization therefore acts as a multiplier: it makes destabilization more consequential by heightening susceptibility. Under such conditions, events that might otherwise be absorbed can trigger intensified contestation and experimentation, increasing variance in imprint trajectories.

Realignment and Trajectory Selection

If desynchronization amplifies susceptibility, imprint trajectories depend on whether cross-level alignment is restored. Realignment refers to the coordinated recalibration of interpretive, structural, and institutional carriers following destabilization. It involves reframing imprint meaning, adjusting enacted routines, and re-establishing or renegotiating institutional legitimacy. Research on rhetorical reprioritization shows how actors reinterpret historically rooted commitments to reconcile inherited orientations with present demands (Sinha et al., 2020). Studies of ideological imprinting demonstrate how organizations recalibrate embedded commitments under institutional transition and contested legitimacy environments (Wang et al., 2019; Han & Zheng, 2019; Marquis & Qiao, 2020). Dynamic imprinting research further indicates that imprint configurations may undergo metamorphosis without being displaced (Simsek et al., 2015). Yet recalibration produces durable outcomes only when adjustments converge across carriers.

Realignment is successful only when interpretive reframing is accompanied by structural modification and renewed institutional validation. Interpretive revision without structural change risks symbolic decoupling, where rhetoric shifts but core practices remain unchanged (Meyer & Rowan, 1977; Bromley & Powell, 2012). Structural change without interpretive coherence can generate internal contestation and ambiguity, weakening stability (Simsek et al., 2015; Sinha et al., 2020). Institutional recoupling without internal recalibration produces fragile legitimacy and renewed instability (Wang et al., 2019; Han & Zheng, 2019). Realignment is thus inherently multilevel and coordinated.

Following realignment attempts, imprint trajectories diverge according to whether synchronization is restored. When alignment is reconstituted across car-

riers, endurance may take the form of stabilized persistence or coherent transformation. Stabilized persistence occurs when synchronization is restored with limited reinterpretation or structural modification; coherent transformation occurs when synchronization is restored through substantive reinterpretation and structural recalibration. By contrast, when realignment fails and desynchronization persists, imprint configurations fragment or gradually erode. While the distinction between stabilization and transformation parallels metamorphosis accounts (Simsek et al., 2015), we explicitly locate trajectory selection in coordination outcomes rather than in environmental congruence alone.

Recursive Realignment and Endurance Capacity

Organizations often face multiple destabilization episodes over time. Endurance therefore depends not only on restoring synchronization in a single episode but on developing the capacity to do so repeatedly. Sedimentation research shows that imprint layers accumulate across successive periods (De Cuyper et al., 2020). We extend this logic by arguing that coordination processes also sediment. Organizations that repeatedly restore synchronization develop patterned mechanisms for recalibration, making subsequent realignment more reliable and reducing residual misalignment across cycles. This capacity differentiates conditional endurance from path dependence. Path dependence emphasizes increasing returns and lock-in through self-reinforcing mechanisms (Sydow et al., 2009). Conditional endurance emphasizes recursive recoordination under change. Persistence emerges from accumulated alignment capacity rather than escalating constraint alone.

This framework therefore clarifies how historically grounded configurations can remain coherent under recurrent disruption. It explains why similar destabilizations may yield divergent trajectories across organizations: durability depends on whether cross-level reinforcement is restored and whether coordination capacity accumulates across cycles.

Methodology

Theory Development Approach

This study adopts an integrative theory-building approach grounded in conceptual synthesis. Rather than testing predefined hypotheses, the objective is to

clarify and extend imprinting theory by specifying the mechanisms underlying long-term endurance. The framework was developed through systematic engagement with foundational imprinting research (Stinchcombe, 1965; Marquis & Tilcsik, 2013), dynamic extensions emphasizing metamorphosis and sedimentation (Simsek et al., 2015; De Cuyper et al., 2020), and recent work on strategic reprioritization and ideological imprinting under institutional turbulence (Sinha et al.; Wang et al., 2019; Han & Zheng, 2019).

The theory-building process proceeded in three stages. First, we conducted a structured review of imprinting scholarship across levels, individual, organizational, and institutional, to identify conceptual tensions between persistence and transformation. Second, we compared imprinting explanations with adjacent perspectives, particularly imprint–environment fit (Tilcsik, 2014; Kriauciunas & Shinkle, 2008) and organizational path dependence (Sydow et al., 2009), to clarify conceptual boundaries. Third, we synthesized insights across these streams to specify synchronization, desynchronization, and realignment as core constructs governing imprint durability.

The framework is formalized through five propositions that articulate a process sequence linking cross-level alignment, destabilization, sensitive-period amplification, realignment, and recursive endurance capacity. Innovation and entrepreneurship studies, particularly research on innovation through tradition and family firm imprinting (De Massis et al., 2016; Erdogan et al., 2019; Gusenbauer et al., 2023), are incorporated as illustrative contexts demonstrating how historically encoded configurations may both constrain and enable adaptation. These examples inform conceptual development but do not constitute empirical testing.

By integrating multilevel imprinting research with process-based theorizing, this approach advances a coordination-based account of endurance while preserving theoretical coherence within imprinting scholarship. The resulting framework clarifies mechanisms rather than introducing new empirical domains, and it generates propositions designed to guide future longitudinal and multilevel research.

Findings

A Multilevel Process Model of Conditional Imprint Endurance

The proposed framework explains imprint durability as a function of cross-level coordination among interpretive, structural, and institutional carriers. Rather than treating persistence as a residual outcome of early embedding, the model conceptualizes endurance as conditional on ongoing alignment across carriers. Five propositions formalize this process.

Proposition 1: Synchronization and Imprint Persistence

Imprint durability depends on the alignment of interpretive, structural, and institutional carriers at a given point in time. Interpretive carriers consist of cognitive schemas and identity commitments that guide action (Tilcsik, 2014; Sinha et al., 2020). Structural carriers embed historically encoded orientations into routines, governance arrangements, and resource allocation patterns (Boeker, 1989; Burton & Beckman, 2007). Institutional carriers reflect field-level evaluative templates that validate or sanction organizational commitments (Wang et al., 2019; Marquis & Qiao, 2020).

Research on multilevel imprinting emphasizes that imprints are distributed across these domains (Marquis & Tilcsik, 2013). However, distribution alone does not guarantee endurance. Persistence requires that carriers mutually reinforce one another. Interpretive commitments must justify structural practices; structural practices must enact interpretive commitments; institutional supports must validate both. When this alignment exists, reproduction of the imprint configuration becomes stabilized through reciprocal reinforcement (Tilcsik, 2014; Simsek et al., 2015).

This coordination logic extends sedimentation research. As imprint layers accumulate (De Cuyper et al., 2020), coherence becomes increasingly dependent on cross-level alignment. Without reinforcement among carriers, layered configurations risk internal contradiction. Synchronization therefore constitutes the structural condition for imprint persistence.

Proposition 1: Imprint persistence is more likely when interpretive, structural, and institutional carriers are synchronized such that cross-level reinforcement stabilizes the coordinated reproduction of the imprint configuration.

Proposition 2: Destabilization and Desynchronization

Organizations face destabilizing events arising from leadership succession, regulatory change, ideological transition, or strategic redirection (Burton & Beckman, 2007; Han & Zheng, 2019; Wang et al., 2019). Such events rarely affect all imprint carriers simultaneously. Interpretive schemas may shift under new leadership (Tilcsik, 2014), structural practices may adjust in response to operational pressures (Boeker, 1989), and institutional standards may recalibrate during political or regulatory transition (Marquis & Qiao, 2020).

Because carriers evolve through distinct mechanisms, destabilization often produces uneven recalibration across levels. Desynchronization occurs when carriers no longer mutually reinforce one another. Rhetorical commitments may persist while practices drift; structural routines may remain stable while institutional legitimacy erodes; internal commitments may conflict with shifting field logics. Dynamic imprinting research demonstrates that imprint strength fluctuates and becomes vulnerable under such contestation (Simsek et al., 2015).

Desynchronization does not determine outcomes by itself, but it alters the structural conditions under which subsequent events operate. It weakens reinforcement and increases the likelihood that destabilization disrupts coherence.

Proposition 2: Exogenous or endogenous destabilization increases the likelihood of desynchronization by weakening alignment among interpretive, structural, and institutional imprint carriers.

Proposition 3: Desynchronization and Sensitive-Period Amplification

Imprinting theory associates sensitive periods with heightened susceptibility (Marquis & Tilcsik, 2013). However, susceptibility may re-emerge when cross-level reinforcement weakens. Sedimentation increases historical layering and structural complexity, raising the possibility of contradiction when coordination deteriorates (De Cuyper et al., 2020). Reprioritization research shows that actors reinterpret historically rooted guideposts when coherence erodes (Sinha et al., 2020).

We conceptualize imprint malleability as the degree to which a historically encoded configuration becomes susceptible to reinterpretation and recalibration under weakened reinforcement. Desynchronization heightens malleability. As alignment erodes, the imprint becomes more vulnerable to contestation and

experimentation. Under these conditions, destabilizing events exert amplified influence on trajectory selection.

Importantly, amplification does not imply that imprints disappear. Rather, desynchronization transforms destabilization from a potentially absorbable disturbance into a moment of heightened structural openness. Events occurring during such periods are more likely to alter imprint trajectories.

Proposition 3: The effect of destabilization on imprint trajectories is amplified when desynchronization heightens susceptibility, increasing interpretive contestation and structural experimentation.

Proposition 4: Realignment and Trajectory Selection

Following destabilization and amplified susceptibility, imprint trajectories depend on whether cross-level alignment is restored. Realignment refers to the coordinated recalibration of interpretive, structural, and institutional carriers. It involves reframing imprint meaning (Sinha et al., 2020), adjusting routines and governance structures (Boeker, 1989), and re-establishing institutional legitimacy under evolving field conditions (Wang et al., 2019; Han & Zheng, 2019).

Realignment succeeds only when adjustments converge across carriers. Interpretive revision without structural modification risks symbolic decoupling (Meyer & Rowan, 1977; Bromley & Powell, 2012). Structural change without interpretive coherence generates internal contestation (Simsek et al., 2015). Institutional recoupling without internal recalibration produces fragile legitimacy (Marquis & Qiao, 2020). Durable restoration therefore requires multilevel convergence.

When synchronization is restored, two endurance outcomes are possible. Stabilized persistence occurs when alignment is reconstituted with limited reinterpretation. Coherent transformation occurs when alignment is restored through substantive reinterpretation and structural recalibration. Both outcomes reflect successful coordination. By contrast, when realignment fails and desynchronization persists, imprint configurations fragment or gradually erode.

This distinction parallels metamorphosis accounts (Simsek et al., 2015) but grounds trajectory selection explicitly in coordination outcomes rather than environmental fit.

Proposition 4: Following sensitive-period amplification, imprint trajectories are selected through realignment processes such that restored synchronization produces stabilized persistence or coherent transformation, whereas failed realignment produces fragmentation or erosion.

Proposition 5: Recursive Realignment and Endurance Capacity

Organizations typically encounter multiple destabilization episodes over time. Endurance therefore depends not only on single-episode realignment but on the accumulation of coordination capacity. Sedimentation research shows that imprint layers accumulate historically (De Cuyper et al., 2020). We extend this insight by proposing that realignment processes themselves sediment.

Organizations that repeatedly restore synchronization develop patterned mechanisms for cross-level recalibration. These mechanisms reduce residual misalignment across cycles and increase the durability of restored alignment. This recursive capacity differentiates conditional endurance from path dependence. Path dependence emphasizes increasing returns and lock-in through self-reinforcing mechanisms (Sydow et al., 2009). Conditional endurance emphasizes the capacity for repeated coordination under change.

Over time, organizations that successfully realign across multiple cycles are more likely to sustain synchronized imprint configurations under future destabilization.

Proposition 5: Organizations that repeatedly achieve successful realignment following destabilization are more likely to develop enduring coordination capacity, increasing the probability of synchronized imprint persistence under future change.

Implications for Innovation and Entrepreneurial Renewal

Although the framework is developed as a theory of imprint endurance, it carries direct implications for innovation and entrepreneurial renewal. Research on innovation through tradition demonstrates that historically embedded knowledge bases can serve as foundations for novel recombination rather than as constraints (De Massis et al., 2016; Gusenbauer et al., 2023). From a coordination perspective, such outcomes are more likely when interpretive commitments, structural routines, and institutional validation remain synchronized. When align-

ment is preserved, historically grounded orientations provide a stable platform from which innovation can be pursued without undermining organizational coherence.

By contrast, desynchronization increases variance in strategic experimentation. When interpretive narratives diverge from structural practices or institutional expectations, innovation efforts may proliferate but lack coordination. Research on imprint reprioritization shows that when coherence weakens, actors selectively reinterpret historically rooted commitments, generating variation in strategic responses (Sinha et al., 2020). Such conditions can produce temporary dynamism; however, without realignment, experimentation risks fragmentation rather than coherent renewal. Studies of family firms demonstrate that innovation becomes sustainable only when reinterpretation of historical commitments is accompanied by structural adjustment and shared narrative alignment (Erdogan, Rondi, & De Massis, 2019; Kammerlander et al., 2015). Absent such coordination, bursts of innovation may dissipate without durable integration.

Realignment determines whether innovation constitutes coherent transformation or drift. When recalibration converges across carriers, reinterpretation of historical commitments, structural modification, and renewed institutional validation, innovation becomes embedded within the imprint configuration rather than detached from it. Studies of family firms show that innovation is sustained when founding narratives are reinterpreted in ways that legitimize structural change (Erdogan et al., 2019; Kammerlander et al., 2015). In such cases, renewal does not erode historical identity but reconstructs it coherently.

Finally, recursive realignment capacity explains why some historically grounded organizations innovate repeatedly without identity loss. Firms that have previously restored cross-level synchronization under change develop patterned coordination mechanisms, enabling subsequent innovation episodes to be absorbed without destabilizing core configurations. Rather than oscillating between rigidity and fragmentation, these organizations achieve renewal through accumulated coordination capacity.

Thus, the coordination framework clarifies why historically embedded firms sometimes innovate coherently while others drift. Innovation outcomes depend not solely on strategic intent or environmental fit, but on whether cross-level synchronization is restored during episodes of change.

Conclusion

This article addresses a central but under-theorized question in imprinting scholarship: how do historically encoded organizational configurations remain coherent under conditions of recurring change? While prior research has clarified how imprints form, how they align with environments, and how actors reinterpret them, the structural mechanisms underlying long-term durability have remained insufficiently specified. By conceptualizing endurance as a function of cross-level coordination, this study shifts analytical attention from formation and fit to conditional persistence.

The proposed framework advances imprinting theory in three principal respects. First, it specifies synchronization as the structural condition governing imprint durability. Rather than attributing persistence to historical depth alone, the model demonstrates that interpretive, structural, and institutional carriers must remain aligned to stabilize coordinated reproduction. This multilevel coordination logic extends prior work that conceptualizes imprints as distributed across levels (Marquis & Tilcsik, 2013) by theorizing how those levels interact dynamically.

Second, the framework introduces desynchronization and realignment as central process constructs. Destabilization does not mechanically alter imprint configurations; its influence is amplified when cross-level reinforcement weakens. Realignment determines whether synchronization is restored or whether fragmentation and erosion follow. By locating trajectory selection in coordination outcomes, the model clarifies how stabilized persistence and coherent transformation can both constitute endurance.

Third, the concept of recursive realignment capacity distinguishes conditional endurance from path dependence. Path-dependent explanations emphasize increasing returns and lock-in mechanisms that constrain deviation (Sydow et al., 2009). By contrast, conditional endurance highlights the accumulated capacity to restore cross-level alignment under change. Durability arises not only from constraint, but from patterned coordination across successive destabilization episodes. The framework also differs from imprint–environment fit models, which focus on the performance consequences of historical congruence (Tilcsik, 2014; Kriauciunas & Shinkle, 2008). Synchronization explains persistence, whereas fit explains performance. An organization may remain coherent yet perform poorly

under misalignment, or improve performance while losing historical coherence. These distinctions clarify the theoretical scope of the present model.

The framework also provides a coordination-based perspective on innovation and entrepreneurial renewal. Innovation grounded in tradition is more likely when cross-level synchronization is restored during recalibration (De Massis et al., 2016; Gusenbauer et al., 2023). Organizations that repeatedly achieve realignment develop endurance capacity that enables renewal without identity erosion (Erdogan et al., 2019; Kammerlander et al., 2015). In this way, the model explains why some historically embedded firms innovate coherently while others experience drift.

Several avenues for future research follow from this perspective. First, empirical studies can operationalize synchronization and desynchronization using multilevel, longitudinal designs that combine archival structural indicators, textual analysis of interpretive discourse, and institutional event coding. Second, comparative analyses may examine why organizations facing similar destabilization episodes exhibit divergent realignment outcomes. Third, research can investigate how coordination capacity accumulates over multiple cycles, thereby refining the measurement of recursive endurance.

Endurance cannot be equated with rigidity, nor can it be reduced to performance advantage. It is better understood as the continued reproduction of a coherent imprint configuration across interpretive, structural, and institutional domains. By specifying synchronization, desynchronization, and realignment as the mechanisms governing trajectory selection, this study advances imprinting scholarship toward a coordination-based understanding of historical persistence under change.

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