

Research Article

Organizational Ambidexterity and Dynamic Capabilities are Euphemisms for Lamarckian Evolution

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The fundamental management-driven premise underlying both Organization & Management (“Organization”) and Strategic Management (“Strategy”) is criticized as the paper’s core theory contribution. More specifically, organizational ambidexterity (“OA”) theory within Organization and dynamic capabilities (“DC”) theory within Strategy are directly challenged by a new and generalizable systems framework of human organization and strategic resilience, called evolutionary intelligence (“EI”) [1]. EI thus becomes a potential successor to, or future variant of, both literature streams. By contrast, EI strongly complements organizational ecology theory, the well-established socioeconomic paradigm that explains business evolution at the industry or ecosystem level of analysis. That is because OA and DC theories are rooted in the antiquated and Lamarckian ideology of acquired, controlled or directed evolution, whereas both organizational ecology theory and EI are rooted in resilient Darwinian evolution via structural / genetic deviation, untamed / natural diversification, competitive selection, and adaptation retention. To highlight the evolutionary deficiencies of OA and DC theories, the theoretical elaboration research method is applied within the context of our rapidly changing sociotechnical history. It explains and predicts the increasingly multidimensional coordination challenges that these coevolving management-driven theories are repeatedly failing to solve. All key tensions between “exploit vs. explore” from OA theory are visually exposed and integrated within the EI systems narrative, as are all four capabilities from DC theory. The EI framework makes it abundantly clear that OA and DC point to a structural dictatorship problem, not to a management capability problem. It is a failure to coordinate at one or more of the four critical coordination nodes of EI due to dictatorial control over one or more organization dimensions. Lamarckian OA and DC theories ultimately offer no means to internalize the necessary evolutionary

lifecycle mechanisms like EI does. The eventual result is evolutionary failure, as organizational ecology theory predicts.

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1. Introduction: Does Organization Need Evolution?

Since at least the early 1960s at the dawn of commercialized information and communications technology (“ICT”), the dominant understanding has been that organizational survival and competitive resilience depend upon effective adaptation within a changing environment ^[2]. In short, a free market economic system and its competing organizations mimic the evolutionary processes found in nature. Not only is this premise very well supported in the broader Organization and Strategy literatures, including organizational ecology theory within Organization ^{[3][4][5][6][7]} and various organizational evolution theories within Strategy ^[8], but it is also intuitively obvious. However, both of these broader literature streams are based on the foundational premise of management-driven strategy. So, even when they explicitly advocate for management-driven evolution or directly invoke biological evolutionary theory, it is nearly always in the context of “market” or “industry” evolution [see, e.g., ^{[9][10][11][12]}]. They are implicitly conceding that it is only the population of related organizations that is evolving, since the critical evolutionary mechanisms are at the population level, not embedded within individual organizations. This makes sense, since *only species evolve, not individuals*.

An individual organization can at best only “co-evolve” with the population and its environment, which implies both a deterministic denial of management-driven agency in the evolutionary process and a “voluntaristic” “shaping” of it at the same time ^{[8][13]}. As a result, Organization and Strategy have consistently responded to this deterministic dilemma with various voluntaristic theories to support a form of directed “co-evolution”. Somehow, organizational ambidexterity (“OA”) can be sustainably managed by heroically divergent CEOs and exceptionally maverick management teams via their dynamic capabilities (“DC”) to “shape” evolution successfully ^{[14][15]}.

Ambitious managers are naturally prone to embrace such loyal academic affirmations of their self-importance. No doubt, many even seek to be eulogized in the case-study canon of leadership lore. Thus, the decades-long self-reinforcing cycle persists. Managers everywhere constantly seek to emulate and to embody this longstanding hagiographic standard of management-driven nirvana, and both Organization

and Strategy stand constantly ready to reaffirm it by exalting its management exemplars. In fact, OA (with its variants) is one of the most researched and strongly supported theories in the Organization literature. And Teece's ^[16] seminal work on DC is the most cited paper not just in the Strategy literature, but in all of management history, with no sign of annual DC publications waning in quantity or significance ^[17]. Moreover, more researchers are noticing the undeniable overlap between OA and DC, with ambidexterity being an obvious dynamic capability in hindsight ^{[18][19][20][21]}.

Unfortunately, both OA and DC theories are still based on the antiquated and Lamarckian ideology of acquired, controlled or otherwise directed evolution via top-down management ^{[12][14][15][22]}. As Siegfried ^[1] argues, this strongly contrasts with the much more resilient paradigm of Darwinian evolution via structural / genetic deviation, untamed / natural diversification, competitive selection, and adaptation retention ^{[23][24]}. Darwin's historical predecessor, Jean-Baptiste Lamarck (1744-1829), was severely criticized for his theory of directed evolution once the obvious necessity for evolution via natural selection became apparent [soon after ^[25] was published]. Therefore, we should likewise criticize the strategically futile ideological devotion to Lamarckism since the inception of management theory. Attempting to rebrand unequivocal Lamarckism with euphemisms like "quasi-Darwinian evolution" or "Evolutionary Strategy Dynamics" [see, e.g., ^[11]] cannot change the fact that what is being described still requires top-down dictatorial strategy. In these theories and frameworks, it is still only the population of firms that is evolving, not the individual organization.

Any truly evolutionary alternative, such as evolutionary intelligence ("EI") here or organizational ecology theory, naturally exposes by comparison any Lamarckian theory of directed evolution (e.g., via OA or DC) as not just obsolete, but also oxymoronic. Yet Lamarckism continues to persist and to dominate within Organization and Strategy. It does so despite its widespread vilification in critical management studies and elsewhere ^[26], despite its predictable history of reinforcing organizational structural inertia leading to evolutionary failure per organizational ecology empirical studies ^{[3][4][5][6][7]}, and despite the enduring purpose of both OA and DC being to achieve "long-term [evolutionary] survival" ^[18] and "evolutionary fitness" ^[12].

Such persistent ironies are arguably due to the institution of management itself remaining firmly rooted within the protective sanctity of shareholder primacy and its dictatorial managerial control over strategy. The perceived indispensability of managerial agents of capital has become so firmly ingrained in most management literatures and the economic system of capitalism that it is often falsely presumed to be

beyond contestation. But contest it we must. The increasing concentration of capital and power via capitalism and its dictatorial agents is catastrophically failing our society and our planet [see, e.g., [\[27\]](#)[\[28\]](#)[\[26\]](#)].

The admittedly ambitious purpose and core theory contribution of this paper is therefore to challenge this foundational management-driven premise of both OA and DC theories. This is done by further developing EI as an alternative evolutionary systems framework for effective long-term Organization and Strategy rooted in four distinct dimensions of coordination [see Figure 1 below, as first introduced in [\[1\]](#)]. To ground the framework firmly within both Organization and Strategy, all major “exploit vs. explore” ambidexterity tensions from OA theory are visually exposed and explained by the EI framework, as are all four capability categories from DC theory.

The theoretical elaboration research method is then applied via the lens of EI to show how the historical progression of OA and DC theories fits within a larger sociotechnical context of multidimensional coordination evolution and the history of modern management. The Discussion section then focuses on why EI is a necessary historical successor to both OA and DC given their glaring omissions of multiple evolutionary mechanisms. As a result, the logical incoherence of OA and DC theories becomes obvious in any discussion about whether they could lead to a single organization’s evolution. Or to put it more bluntly, both “ambidexterity” and “dynamic capabilities” are effectively exposed as irrational and oxymoronic Lamarckian metaphors due to their lack of any competitive coordination. We no longer have to believe in the perennial fairytale of a CEO’s two hands being controlled by the same paradoxical dictator nonsensically competing with *and for* the same capabilities in order to “co-evolve”.

In summary, as Siegfried [\[1\]](#) strongly argues, any effective organization with high strategic resilience must internalize all core evolutionary mechanisms within a four-dimensional multicyclic system. That is the only way competing perspectives, directives, alternatives, and priorities over scarce resources (i.e., the four dimensions of organization) can be coordinated. In other words, any truly evolutionary organization seeking long-term survival and prosperity must internally mirror the much larger evolutionary systems of multidimensional competition and integration in which all organizations operate. The only major difference from Siegfried [\[1\]](#) is that this paper comes to the same conclusion by comparatively analyzing and exposing the glaring omissions of core evolutionary mechanisms within the dominant Organization and Strategy theories of OA and DC.

One key implication of these findings upon future research is how EI is an extremely generalizable framework of human organization, which should not be surprising given the theory of evolution on which it is based [23]. In fact, EI is so generalizable across time that it implicitly explains and predicts the sociotechnical gaps that will likely be filled in the future as humanity's multidimensional coordination capability evolves. This future-oriented perspective can be seen through the lens of EI in this paper and in Siegfried [29], and it will be significantly expanded and enhanced in forthcoming research.

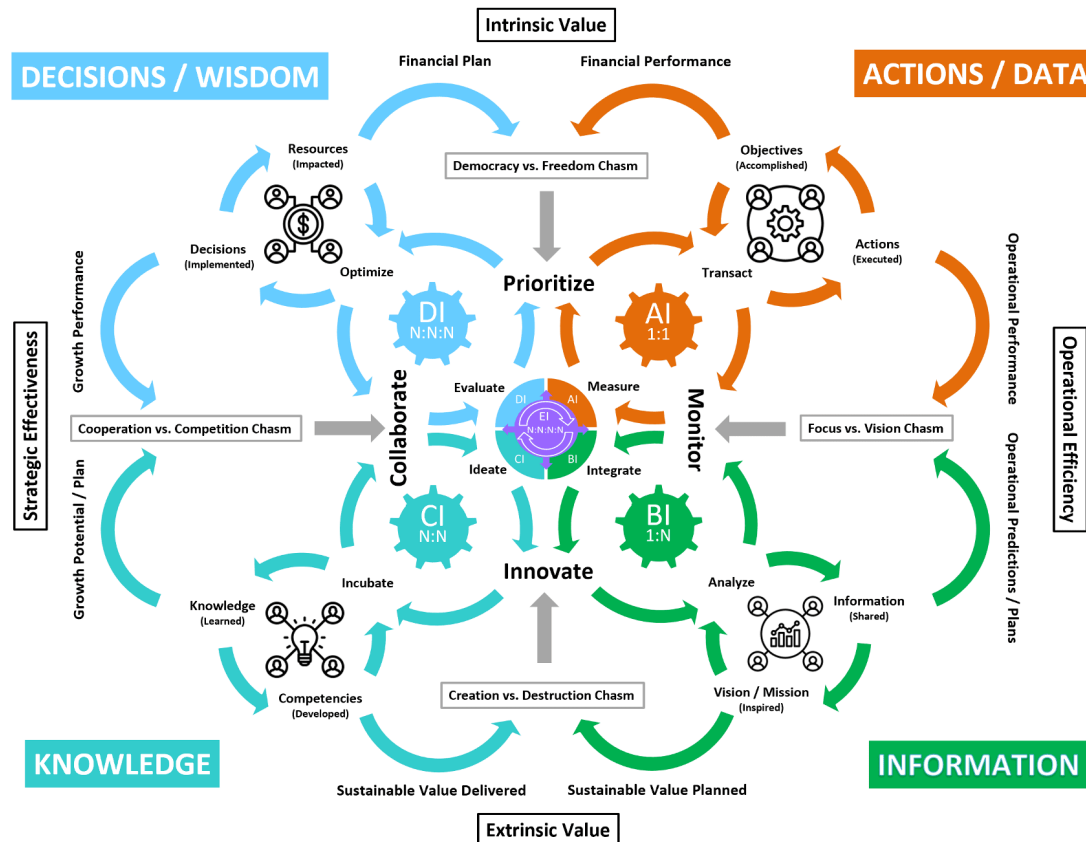


Figure 1. The EI Framework

2. Methods

Theoretical elaboration and microhistory, as thoroughly described by Hargadon and Wadhwani [30], are the primary methods of theorizing applied in this paper. The EI framework was originally introduced by Siegfried [1] as the result of reflexively and serendipitously applying the microhistory method to extend my unique lived experience to the enduring context of all human organization. An implicit extension of

that method via theoretical elaboration is now applied more objectively and deliberately to explain and predict the increasing challenge to dominant management-driven theories of Organization and Strategy within the context of our rapidly changing sociotechnical history. The results represent a macrotemporal extension of EI to explain the evolutionary history of both OA and DC theories.

It is important to recall here from Siegfried ^[1] that EI's four dimensions of organization are expressed in R:A:D:E network graph format (for Resources, Alternatives, Directives, and Employees/Effort /Evaluators). These four dimensions are synonyms for Property/Platform, Preferences, Purposes, and People/Perspectives, respectively. When any of these terms is used in a dimensional context, it will be followed by its dimensional ID (i.e., R, A, D, or E) unless otherwise clarified. Also, n:n:n refers to the A:D:E dimensions only, and both 1:n and n:n refer to the D:E dimensions only. The “n” implies organization-scale (or team-scale) members of that dimension coordinating, and a “1” implies dictatorial control over that dimension. Sometimes a big “N” is used instead to imply societal-scale (or Web-scale) members of that dimension coordinating or connecting.

In addition, the interdisciplinary research method is clearly also being applied to integrate Organization and Strategy with the mechanisms of evolutionary theory. The latter has a long and well-established history of interdisciplinary generalizability ^{[23][31][32][33][34]}. Thus, the primary epistemological perspective being applied here is radical structuralism due to the paper's fundamental structural challenges to both Organization and Strategy.

3. Results and Analysis

Linkages between EI and the theories of OA, DC, and Darwinian evolution are established and analyzed as a prelude to the results. The theoretical elaboration method is then applied to extend the microevolution of EI within a single organization to the macroevolution of OA and DC theories across our recent sociotechnical history. This is done to further develop a metatheory of increasingly complex multidimensional coordination. The subsequent Discussion section then addresses the implications upon these theories, primarily by criticizing their omissions of multiple evolutionary mechanisms and recommending an alternative path via EI.

3.1. Linking EI to OA, and then OA to Evolutionary Theory

One can see from Figure 2 that it has been updated from Siegfried ^[1] to integrate EI directly with the four OA “chasms” and the four DC quadrants. It was previously integrated directly with the four core lifecycle

stages of evolutionary theory and the four components of the Balanced Scorecard, DIKW, and the functional organization. The latter three practitioner frameworks will not be discussed again here. Notice how the four chasms in the EI framework correspond directly to all the most difficult and conflicted nodes of coordination. In effect, they elucidate all the paradoxical root causes of OA theory, along with the critical “dual purpose financial/social tradeoffs” hampering organizational rationality and resilience ^[18]
^{[22][35][36][37]}.

They are called “chasms” in EI because, unlike mere performance gaps that can sometimes be bridged, ambidexterity chasms can never be bridged due to their inherently paradoxical or competitive nature. Less obviously, there are also two more ambidexterity chasms between the opposite poles of the framework. Along the horizontal “tactical axis”, shorter-term cost efficiency managed primarily in the right-hand gap is in constant conflict with the medium to longer-term strategic growth managed in the left-hand gap. Along the vertical “strategy axis”, the long-term intrinsic value gap managed on behalf of the owners is in constant conflict with the sustainably long-term extrinsic value gap managed on behalf of all stakeholders. So, in effect, the four obvious ambidexterity chasms are nested within these two higher-level chasms of “dual purpose”.

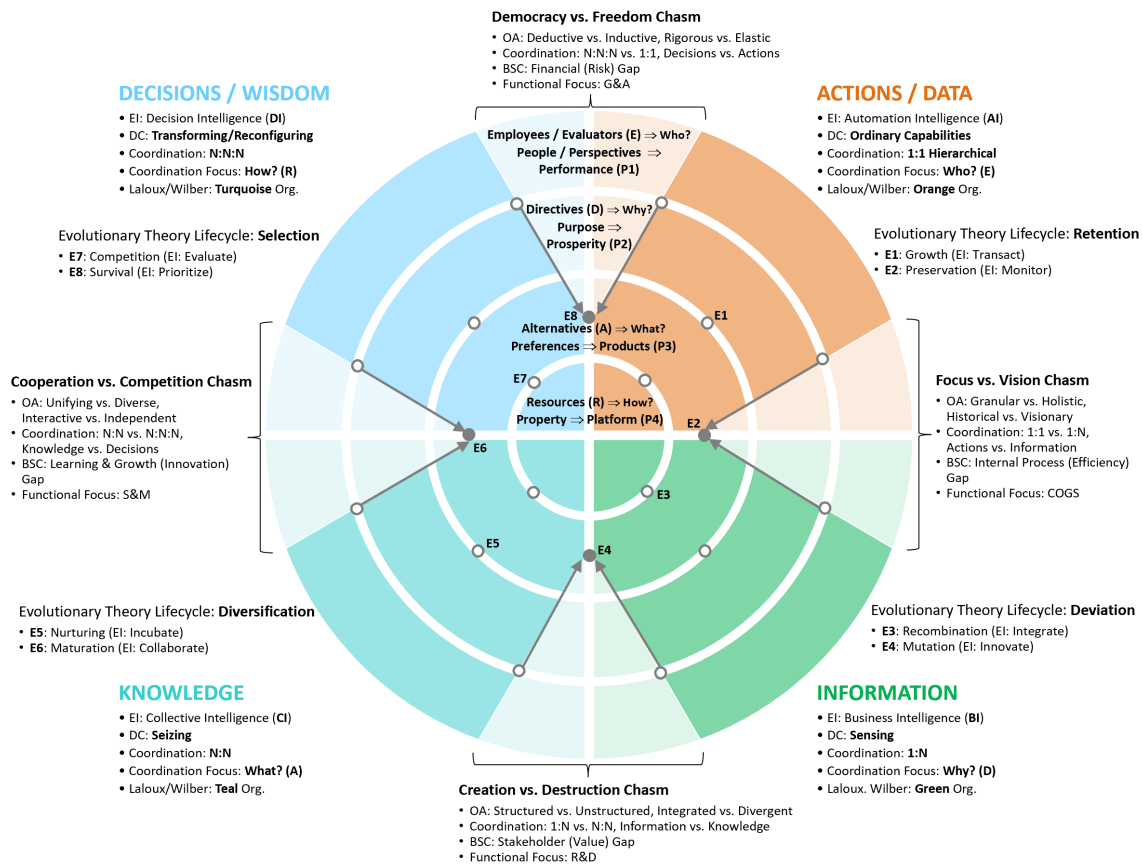


Figure 2. The 4X4 Typology Underlying EI and How it Integrates with Seven Other Theories and Frameworks.

Note that each dot corresponds to one of the 20 process nodes of EI in Figure 1. The four filled dots correspond to the four critical coordination nodes, clockwise starting from the right: Monitor, Innovate, Collaborate, and Prioritize. The four chasms likewise correspond to the four core OA tensions, the four gaps of the Balanced Scorecard (BSC), and the four functional foci of management. The four DIKW and DC categories are likewise noted in each quadrant, as are the four core (and eight total, labeled E1 to E8) evolutionary lifecycle mechanisms and four color-coded modern stages of organization evolution (Orange, Green, and Teal up to the present per Frederick Laloux, plus Turquoise in the future per Ken Wilber^[38]).

We can actually connect all ambidexterity chasms together with yet another multidisciplinary concept. With it, all ambidexterity tensions can be effectively transformed from a resilience liability into a major competitive advantage via the multidimensional coordination inherent within EI. That core concept is the namesake of the EI framework: evolutionary theory. The main connection to evolutionary theory is obviously via the “exploit vs. explore” tension concept, which is the core characteristic of OA theory. The last two columns of Table 1 outline the undeniable links between these competitive tensions and the

evolutionary lifecycle across all organization process flows. And Figure 2 shows exactly how and where the four core (and eight total, labeled E1 through E8) evolutionary lifecycle mechanisms are deeply integrated within the overall process narrative. In particular, the EI framework makes it surprisingly clear how each major tension from OA theory is a pivotal node of competitive coordination within an evolutionary system of organization.

As Siegfried ^[1] explains in more detail, a breakdown in evolution occurs when the naturally integrative flow of evolutionary coordination is thwarted somewhere along its nonlinear pathway. According to Figure 2, the most vulnerable failure points are clearly at the inter-quadrant performance gaps, where coordination is most prone to competitive conflict. These are the four critical coordination nodes: Monitor, Innovate, Collaborate, and Prioritize. These are where conflicting perspectives (E), directives (D), alternatives (A), and ultimately resource (R) allocation priorities, respectively, are integrated to achieve rationally coherent collective coordination. At each of these four nodes, influence vectors from three different EI process sources and across three different dimensions (E, D, and A) between two different intelligence quadrants need to be coordinated. This implies a very difficult 3D coordination requirement at each coordination node. ^[1]

This largely explains why evolution has been so difficult to mimic within a single organization, since 3D coordination must be done collectively, by definition. Dictatorial control – instead of competitive collective control via organizational democracy – is generally relied upon to bypass the necessary and more difficult task of multidimensional integration at the four coordination nodes. A lack of organizational resilience is the inevitable result. This then leads progressively towards evolutionary maladaptation, and then ultimately to adverse natural selection, thereby sealing an organization's predictable fate ^[1].

EI ID	Organizational Intelligence	Key Output	Coordination Dimension Focus	Organizational Ambidexterity Chasms at the Four Coordination Nodes and Overall (i.e., Exploit vs. Explore Tensions)	Process Flow Parallels between EI and the Evolutionary Lifecycle
					----- Visualized as E1 to E8 in Figure 2 -----
AI	Automation Intelligence	Tactical Actions (+ Raw Data to Integrate)	E: Evaluators / Employees / Effort Who?	Monitor (Focus vs. Vision Chasm): via Granular Historical Actions (Data) → Exploit and Wholistic Visionary Information → Explore	From Survival (E8: Prioritize) To Growth (E1: Transact) To Preservation (E2: Monitor)
BI	Business Intelligence	Information	D: Directives Why?	Innovate (Creation vs. Destruction Chasm): via Structured Integrated Information → Exploit and Unstructured Divergent Knowledge → Explore	From Preservation (E2: Monitor) To Recombination (E3: Integrate) To Mutation (E4: Innovate)
CI	Collective Intelligence	Knowledge	A: Alternatives What?	Collaborate (Cooperation vs. Competition Chasm): via Unifying Interactive Knowledge → Exploit and Diverse Independent Decisions → Explore	From Mutation (E4: Innovate) To Nurturing (E5: Incubate) To Maturation (E6: Collaborate)
DI	Decision Intelligence	Decisions	R: Resources How?	Prioritize (Democracy vs. Freedom Chasm): via Deductively Rigorous Collective Decisions → Explore and Inductively Elastic Individual Actions (Data) → Exploit	From Maturation (E6: Collaborate) To Competition (E7: Evaluate) To Survival (E8: Prioritize)
EI	Evolutionary Intelligence	Evolution	N:N:N:N 4D Hub of Coordination Consensus	Evolve (Preservation vs. Progress Overall Chasm): via Strategically Core Commitments → Exploit and Experimentally Disruptive Deviations → Explore	From Retention (Growth + Preservation) To Deviation (Recombination + Mutation) To Diversification (Nurturing + Maturation) To Selection (Competition + Survival)

Table 1. OA and Evolution within the Four Intelligence Quadrants (4 Is) of EI. *Note that the four coordination nodes (i.e., Monitor, Innovate, Collaborate, and Prioritize) between the four quadrants of EI are critical to achieving an unimpeded flow of sustainable evolution, since each node contains a competitive paradox requiring rationally coherent coordination across three dimensions of organization. Each node is somewhat arbitrarily associated below with the EI quadrant that uses it for exploitation rather than exploration – except for the DI quadrant, which should always drive exploration in its two adjacent chasms (similar to the AI quadrant, which can only drive exploitation). That is because exploitation tends to be the default when OA predictably fails without multidimensional / collective coordination to integrate conflicts continuously without dictatorial intervention.*

March [³⁹], p. 72] has already made an unambiguous reference to the connection between ambidexterity tensions and evolutionary theory based on “evolutionary models of organizational forms ... balancing the twin processes of variation and selection... essential to survival...in a changing environment”. Therefore, this connection is definitely not new. Many others, such as O’Reilly and Tushman [¹⁸] and Burgelman [⁴⁰], have also linked ambidexterity tensions and evolutionary theories. Burgelman uses the “exploit” vs. “explore” synonyms of “induced” vs. “autonomous” “strategic behavior” to describe what management needs to “balance”.

However, now the EI framework can explicitly confirm this link with a very credible process flow narrative that maps all core evolutionary mechanisms to all major ambidexterity tensions. March [³⁹], p. 73] even alludes to all four (and only those four) ambidexterity tensions specified in the EI framework’s performance chasms:

1. The “long run” vision vs. the “short run” focus tension, which is mostly within the Monitor coordination node;
2. The intrinsic “organization” vs. the extrinsic “social system” tension, which is mostly within the Innovate node;
3. The new business vs. legacy business tension in “one part” vs. “another part” of an organization, which is mostly within the Collaborate node; and
4. The prioritization tension of exploiting low risk profits “at a particular historical moment” vs. exploring high risk opportunities at “another time” in an organization’s history, which is mostly within the Prioritize node.

Regarding the paradoxical tension within the Prioritize node, uncertainty severely punishes risky alternatives (A) via NPV and IRR financial math after an organization reaches an historically mature stage. This is due to the relative certainty and proximity of cash flows from existing businesses compared to the uncertain and more distant cash flows from future initiatives. This creates a paradoxical tension between competitive strategic coordination via organizational democracy (which prioritizes long-term survival) vs. dictatorial tactical control via management freedom (which prioritizes short-term profits) [1]. Agency theory predicts that any such paradoxical tension would be resolved by choosing tactical management freedom every single time, even when it is not in the collective long-term interests of the organization or society. The implication, of course, is that the entire institution of management does not appear to be compatible with an evolutionary system of organization, which is explored further in the Discussion section below.

3.2. Linking EI to DC via the Same 4X4 Coordination Typology

The link between EI and DC should now be easy to see, since the four quadrants of EI correspond directly to the four capabilities of DC theory. The so-called “ordinary capabilities” inherent in an existing business correspond to the AI quadrant of EI, and the three dynamic capability categories of “sensing, seizing and transforming / reconfiguring” [as defined in [12][41][42]] directly correspond to the BI, CI, and DI quadrants, respectively. “Sensing” is clearly information-driven (like in BI), “seizing” is clearly focused on developing new ideas and opportunistic initiatives (like in CI), and “transforming / reconfiguring” is clearly referring to strategic reprioritizations and resource reallocations (like in DI).

Just like only the latter three quadrants of EI enable an otherwise static operation of organizational Actions to evolve, only the three capability categories designated as “dynamic” within DC theory are able

to do so. See Figure 2 to visualize this link. Interestingly, Teece ^[41] teases that DC has the potential to become a systems theory, but all that he provides are these three clusters of dynamic capabilities and a Venn diagram of how DC roughly fits in to other core components of an organization.

3.3. EI as a Metatheory of Coordination Coevolution

Now is when the theoretical elaboration method is applied to extend the initial results of the EI framework to the sociotechnical history of OA and DC theories. This is done via the coevolutionary concept of multidimensional coordination underlying the four quadrants of EI. Table 2 summarizes the results.

Theory or Framework	1:1 Coordination	1:N Coordination	N:N Coordination	N:N:N & N:N:N:N Coordination
Start of Era	~ 1959-61	~ 1994-97	~ 2004-10	Predicted Future
Sociotechnical History	Commercialized ICT for 1:1 Automated Coordination	1:N Web1	N:N Web2	1:N:N:N (+ N:1:N:N Blockchain) Web3, then N:N:N:N Web4
DIKW Progression	Data (Integration N/A)	Information (1D Integration)	Knowledge (2D Integration)	Organizational Wisdom (3D Integration)
Evolutionary Intelligence (EI)	Automation Intelligence (AI)	Business Intelligence (BI)	Collective Intelligence (CI)	Decision Intelligence (DI)
Organizational Ambidexterity (OA)	Contingency Theory (Ambidexterity via Orgs.)	OA (Ambidexterity via Teams)	Paradox Theory (Ambidexterity within Individuals)	EI (Evolution Replaces OA and Ambidexterity via Organizational Wisdom)
Dynamic Capabilities (DC)	Resource-Based View (Static Capabilities)	DC (DC via Teams)	DC Microfoundations (DC within Individuals)	EI (Evolutionary Intelligence as the Ultimate DC)
Popularized Organization Practices	Behavioral Management (1:1 Hierarchical Coord.)	Participatory Management (1:n Rule-Based Consensus)	Self-Management (n:n Role-Based Consent)	Organizational Democracy (n:n:n Collective Coord.), then N:N:N:N Societal-Scale Coordination

Table 2. EI as a Metatheory of Coordination Coevolution

Organization and Strategy exist within a changing sociotechnical and economic environment, so OA and DC theories have likewise been forced to adapt – or at least to rebrand – with these changes. Although the core premise of management-driven organization and strategy steadfastly persists, the locus of ambidexterity tension has been forced to shift over time with the locus of the delegated dynamic

capabilities necessary to manage it. The result has been three major historical stages of OA and DC theories, respectively, per the first three data columns of Table 2:

1. “Contingency theory” within Organization and the “resource-based view” of the firm within Strategy as the precursor theories to OA and DC, respectively, starting around 1959–61, to address sociotechnical change via separate organizations with distinct yet static capabilities [\[2\]\[43\]](#);
2. Core OA and DC theories, starting around 1996–97, to understand how management must learn to direct the evolution of individual organizations via independent teams to allow them to survive in response to rapid sociotechnical change [\[16\]\[44\]](#); and
3. “Paradox theory” within Organization and “DC microfoundations” within Strategy, both popularized starting roughly between 2004–10, to emphasize how individual managers (and even staff) must first acquire the ability to self-evolve via their paradoxical thinking and micro-DCs in order to facilitate the evolution of their organizations [\[12\]\[45\]](#).

It is not a coincidence that the timings of these three stages also correspond directly to the three major shifts in popularized Organization practices from behavioral management to participatory management to self-management, as shown in the last row of Table 2. As this paper argues, that is because popularized Organization practices tend to focus on the most popular locus of purported coordination success. By contrast, dominant OA and DC theories tend to focus on how to escape each era’s most troublesome, and hence related, locus of coordination failure.

What links all of these seemingly independent evolutions together across time is our sociotechnical history of increasingly complex multidimensional coordination capabilities via ICT and Organization practices, per the first and last data rows of Table 2. The first is documented in detail by Siegfried [\[29\]](#), particularly via the multidimensional progression of Web1 through Web4 technology [as supported by [\[46\]](#)]. The second is beyond the scope of this paper. However, the multidimensional coevolution of Organization practices will be covered in depth in at least two forthcoming papers, which are not necessary to validate this paper’s core arguments.

The focus here is just on the common multidimensional coordination progression embedded in the stepwise coevolution of OA and DC theories, from 1:1 to N:N (or n:n), starting at the same moments in sociotechnical history. Since the entire point of exposing this coincidental progression is to explain and to predict the coevolutionary history of these theories and their future impact, further theoretical elaboration is deferred to the next Discussion section.

4. Discussion

EI has potentially profound implications on the current status of knowledge. Beyond just directly linking to at least seven different independent theories and frameworks, EI radically transforms, upgrades, and exposes their eventual obsolescence or predicted evolution. In Siegfried [\[1\]\[29\]](#), we can see this same multidimensional coordination progression across history in the DIKW transformation process, ICT, AI, and the Web, just like in the two rows of Table 2 related to OA and DC theories. We can thus predict the same coevolutionary progression of multidimensional coordination in these two sets of theories, while at the same time explain exactly how and why they fail to incorporate the necessary mechanisms for evolutionary coordination. Moreover, the same theoretical lens of EI can be applied to explain how and why other theories and frameworks labeled as “evolutionary” are definitively not evolutionary within a single organization.

4.1. OA and DC are Euphemisms for Lamarckian Evolution

The EI framework makes it abundantly clear that OA and DC point to a structural dictatorship problem, not to a management capability problem. It is a failure to coordinate at one or more of the four coordination nodes due to dictatorial control over one or more organization dimensions. To explain it figuratively using the literal meaning of “ambidexterity”, collective decision making always involves more than two hands and many brains. Therefore, being ambidextrous in a figurative sense would come much more naturally to an organizational system than to a corporate dictator / CEO. Organizational “ambidexterity” is thus the wrong metaphor for the same reason that a “balance” between exploitation and exploration is wrong. Both expressions reflect the choice of a single dictatorial employee (E) or directive (D), which is an evolutionary dead end. What is needed is not “balance” or “ambidexterity”, but rather a continuously *evolving* collective competition of ideas and choices. Evolution is the answer, not “ambidexterity”. We quite literally *need* each other’s diversity to be resilient, to survive and thrive together.

Unfortunately, however, all large organizations today are still dictatorships. And all dictatorships suffer from a significant cognitive dissonance effect when strategic mistakes are made or the environment changes to disrupt the viability of a previously successful strategy [\[13\]](#). Often, cognitive dissonance can become hyperbolic due to highly compensated leadership success and a repeatedly validated ego attached to previous strategic commitments. This results in organizational rigidity, an inability to react or self-

correct until it is too late, and a fundamental lack of strategic resilience ^{[3][4][5][6][7]}. The exact opposite of this approach is EI, where recalibration of strategy is not only competitively constant and evolving, but proactively experimental instead of reactive. No dictatorial power is able to protect a previously successful, but now obsolete, strategy when the time comes for the collective organization to cast it ruthlessly aside. And perhaps most important, no collective ego exists to maintain the artificial sanctity of a previous strategic commitment, in the same way that nature has no ego artificially protecting a maladapted species from extinction.

OA and DC theories can arguably be viewed as the flip side of popularized Organization practices and success stories. They focus on when and how coordination is needed but failing, whereas popularized Organization practices focus on when and how coordination is apparently working.

Beginning with Burns & Stalker's ^[2] book first published in 1961, which was at the dawn of commercialized ICT, the emphasis was on contingency theory to resolve ambidexterity tensions. A complete structural and spatial separation between 1) routine "mechanistic" businesses in stable markets and 2) nonroutine "organic" businesses in rapidly changing markets was advised to prevent exploit vs. explore coordination conflicts within the same organization. This makes sense, since a 1:1 dictatorial hierarchical structure from top to bottom has no flexibility to mix the fundamentally opposing directives (D) related to exploitation vs. exploration. The same coordination logic can be applied to explain the rigid resource-based view of static capabilities in Strategy, since static capabilities can only differ fundamentally in completely separated organizations when 1:1 hierarchical command-and-control exists. By contrast, with 1:N ICT capability and a corresponding 1:n coordination capability at the tactical level via Organization's popularized participatory management practices (starting around 1994-97), multiple directives (D) could suddenly be pursued and coordinated within the same business via teams ^[29]. Coincidentally, this is exactly when ambidexterity was first introduced as an organizational concept by Tushman & O'Reilly ^[44]. And it is also exactly when the related concept of DC was first introduced by Teece et al. ^[16] on the Strategy side. This marked the shift from complete structural/spatial separation to just "temporal" or "contextual" separation to allow for "multiple cultures" of control (i.e., multiple directives (D)), thereby avoiding coordination conflicts between opposing exploit vs. explore activities ^[45].

In effect, it can be argued that OA and DC were concurrently popularized to describe the fundamental coordination difficulties (and persistent failures) associated with doing what 1:n participatory

management, TQM, etc. recently allowed organizations to do via independent teams: to coordinate via cultural and rule-based consensus (i.e., via the directives (D) dimension of organization). In other words, it is 1:n coordination that facilitated the “multiple cultures” of “ambidextrous” *tactical* control. However, these competing cultures are all still under the same 1:1 dictatorial hierarchy of *strategic* control. Hence the new strategic vs. tactical ambidexterity tension within a single organization requiring a new phase of OA and DC to theorize how organizations can avoid failure when facing this difficult new tension.

Likewise, we see the same association between Organization practice, OA theory, and DC theory with the next stage of coordination difficulty and failure. This is referred to as paradox theory in Organization, and as “DC microfoundations” in Strategy. Although paradox theory is not new, since it is based upon several philosophies at least as old as yin-yang dualism, it has only more recently become popularized in Organization theory and practice by applying it to the level of *individual thinking*. That popularization wave [starting around 2010-2015 per ^[45]] is exactly coincidental with the shift in focus towards n:n self-management practices [^[38], p. 100]. Most important, modern paradox theory and DC microfoundations in an Organization or Strategy context focus almost entirely on internalized ambidexterity conflicts at the level of the individual ^{[12][19][22][47]}.

So, once again, this ties exactly to the distinct coincidental shift in the primary locus of historical coordination conflict, this time from teams (who are isolated under 1:n via rules-based consensus) to individuals (who are isolated under n:n via dictatorial role-based consent). Or, to put it more figuratively, an “ambidextrous” 1:n organization uses its two hands separately via cloistered team cultures (i.e., directives, (D)) to keep them separated contextually or temporally. By contrast, a single individual acting with dictatorial tactical consent per n:n self-management principles must now somehow manage (via DC) all of this “paradoxical” duality inside his or her head via a continual balance of directly opposing exploit vs. explore forces.

As a result, it can also be argued that both paradox theory and DC microfoundations were concurrently popularized to address the fundamental coordination difficulties (and persistent failures) associated with doing what n:n self-management recently allowed organizations to do. In other words, contingency theory, OA, and paradox theory in Organization – along with the resource-based view, DC, and DC microfoundations in Strategy – can all be understood as popularized descriptions of the historically shifting coordination bottlenecks at the organization, team, and then individual levels, respectively.

Unfortunately, none of these theories explain why these Organization practice bottlenecks are coincidentally shifting across history, which is what the EI framework adds as a theoretical contribution.

What underlies all of them is the stepwise progression in multidimensional coordination difficulty from 1:1 to 1:n to n:n. At each stage, there is a different locus of ambidexterity tension and coordination difficulty: first between organizations under 1:1 hierarchical coordination, then between teams under 1:n coordination, and finally within each individual under n:n self-management coordination. Evolutionary failure results when dictatorial control substitutes for the competitive strategic coordination required by EI to resolve these tensions ^[1]. That naturally leads to the popularized amplification of different coordination bottlenecks over time in the Organization and Strategy literatures. Each new popularized Organization practice bottleneck thus becomes a new phase of popularized OA and DC theory.

As a result, OA and DC theories ultimately just narrate a tragic history of evolutionary failure, not success. Contrary to how these theories are commonly celebrated in the literatures as an evolutionary means to “transcend” or escape maladaptation and adverse natural selection, they are in fact the exact opposite. OA and DC theories are not tools for success. They are prophecies of catastrophic evolutionary failure pointing to how an organization will likely die. Until organizations can escape their multidimensional dictatorship problem to allow for genuine evolutionary coordination described by the EI framework, uncoordinated ambidexterity tensions at the organization, team, or individual level will continue to lead inexorably to organizational failure.

This logic is supported by nearly 50 years of research on the theory of organizational ecology, which has become one of the most influential socioeconomic paradigms in history. This is largely due to its ability to explain how the “ecology” or competitive environment of organizations ultimately determines their survival ^{[3][4][5][6][7]}. In other words, the composition of organizational populations is constantly evolving because single organizations retain “structural inertia” that cannot evolve. That inertia is explained and even predicted by the implications of the EI framework, thereby further reinforcing the predictive power of organizational ecology theory.

The root of the problem is simple. OA and DC theories offer no means to internalize the evolutionary lifecycle mechanisms like both organizational ecology and EI do. Of the eight evolutionary mechanisms in Figure 2, the latter four in the CI and DI quadrants (incubation, maturation, competition, and survival) are not even acknowledged, let alone incorporated, as decentralized, collectively-driven organizational processes. By contrast, OA and DC consider all four of these EI processes to be management-driven.

Similar logic applies to the prior two evolutionary “deviation” mechanisms of recombination and mutation in the BI quadrant, even though those start, by definition, via isolated individuals rather than collectively. OA and DC can offer no evolutionary mechanism for all those isolated and conflicting

deviations to be processed independently, let alone competitively, by management-driven dictatorial control. And even for the first two “retention” evolutionary mechanisms of growth and preservation in the AI quadrant of EI, OA and DC offer no collectively coordinated means to optimize the tradeoff between these two activities to maximize the chance of reproductive success (i.e., to move to recombination in the BI quadrant, as opposed to cycling backwards towards the DI quadrant and then not being selected for continued survival).

Berti & Simpson ^[22] despairingly arrive at a very similar conclusion with respect to the managerial futility of pursuing paradoxically opposing directives (D) or alternatives (A). Even if every employee could somehow internalize all the schizophrenic paradoxes that are necessary to sustain organizational evolution, the question still remains regarding how to empower and coordinate all those employees reacting to those paradoxes independently. Even worse, which is Berti & Simpson’s ^[22] main point, employees have no power or means to respond to paradoxes strategically. Logically, this implies that achieving any substantive and sustainable organization-scale ambidexterity via paradox theory is Lamarckian nonsense.

According to O’Reilly & Tushman ^[18], who first popularized the term organizational ambidexterity in 1996, the singular immutable purpose, or “the sine qua non”, of pursuing ambidexterity is “long-term survival”, to “enable the firm to survive in the face of changed market conditions”, i.e., via strategic evolution. Paradox theory, like any variant of OA theory, is thus wholly incapable of fulfilling its primary evolutionary purpose, and it is therefore not a viable path to success. It is merely pointing to where coordination failure will continue to occur and how an organization will likely die. This will persist as long as popularized Organization practices, OA theory, DC theory, and management all continue to be devoted to their ideological faith in Lamarckian directed evolution.

Of course, this does not imply that organizations can never change. It just implies that they cannot truly evolve, by changing effectively beyond merely superficial adaptation, and with sufficient efficiency and consistency to survive significant and continuous environmental disruption.

By contrast, EI could logically be the next and perhaps final chapter in the history of OA and DC theories. Without explicitly incorporating evolutionary lifecycle mechanisms in some manner like EI does, explaining how organizations can survive ambidexterity tensions via strategic evolution is tautologically not possible. Likewise, simply pointing out uncoordinated tensions in a changing environment accomplishes nothing beyond highlighting natural selection pressures and an organization’s fundamental inability to adapt and to evolve strategically. EI, with its embedded organizational

democracy and organizational wisdom coordinating synergistically in 3D fashion ^[1], should therefore be viewed as the potential next phase of OA and DC research. What is clearly missing is a continuous collective competition amongst independent and diverse strategic prioritizations of alternatives (A), along with a continuous optimization of resource (R) allocations across those alternatives (A).

4.2. An “Evolutionary” Label Does Not Imply Organized Evolution

A similar critique can be made against other so-called “evolutionary” theories or frameworks, such as “evolutionary organization theory” advocated by Burgelman et al. ^[13]. It can only incorporate the competition that is necessary for evolution *after* scarce resources (R) have already been allocated to “strategic initiatives”, many of which are doomed to fail. Claiming to achieve an “evolutionary organization” merely by putting a legal wrapper around a portfolio of independent organizations being funded to compete with one other is not just meaningless semantics, but also financially self-destructive. Even worse, this portfolio still relies on Lamarckian OA or DC to “balance” funding across its organizations. Burgelman et al. ^[13] even cautiously extol the “guided evolution” to do so. This is just a repackaging of organizational ecology theory: a population of organizations is evolving only because its individual organizations cannot. As a result, it is predicted that current OA and DC theories will either wither into irrelevance once such specious appeals to evolutionary mechanisms are more widely understood, or they will simply become subsumed under the umbrella of a coordination metatheory like EI.

As Laloux ^[38] repeatedly emphasizes via his “Evolutionary-Teal” moniker, genuine evolution *within* organizations – not amongst a population of them – is the minimum threshold to achieve sustainable socioeconomic prosperity. In fact, humanity’s survival arguably depends on us reaching it, since it is also the master key to solving our grandest challenges. Once we understand that, as Laloux clearly does, we desperately want to believe that an evolutionary form of organization is already within our reach even when we intuitively know it is not. It is a powerful combination of both hope and despair, and it is only human that our hope runs too far ahead of our despair. However, one can at least find solace that there is now a visible evolutionary path with identifiable coordination dimensions and obstacles that further Organization and Strategy research can explore.

In fact, this evolutionary path has also been deliberately embedded within the colors of Figures 1 and 2, which are now explained for the first time as the seventh framework or theory that EI integrates with. These colors tie directly to Laloux’s ^[38] “stages of human consciousness” and organization: Orange

organization in AI quadrant 1, Green organization in BI quadrant 2, and Teal organization in CI quadrant 3. So, as one can see, Teal is not the final or “evolutionary” stage that Laloux hoped it could be, at least according to the EI framework.

Figures 1 and 2 point to a fourth stage of post-ICT modern organization development beyond today’s Teal, which Laloux [38] did not envision clearly but hinted at being likely in Chapter 3.5 and Appendix 2. This stage’s “Turquoise” color, like in DI quadrant 4, is taken from the stages of *individual human consciousness* categorized in Integral Theory by Laloux’s colleague, Ken Wilber. That is whom Laloux [38] explicitly borrowed from in categorizing his related stages of *collective human organization*. And as Figure 1 hints at via the central N:N:N:N coordination core of the EI framework, there is actually a fifth and final stage of “Indigo” societal-scale organization predicted, which is likewise borrowed from Wilber’s color-coded progression for humanity. Siegfried [29] introduces and discusses this Web4 stage of human coordination. Forthcoming research will delve much more deeply into the relationship between EI and Laloux’s framework, including why Teal organizations are still at least one major step short of incorporating all the necessary evolutionary mechanisms within a single organization.

5. Conclusion

In the absence of multidimensional coordination, which is the collective process of integrating conflicts, dictatorial control must fill the void. When that happens repeatedly, evolutionary failure becomes inevitable, especially in a rapidly changing sociotechnical and economic environment like we have experienced since at least the 1960s. Even worse, our capitalist society itself is rapidly headed for evolutionary failure due to an inability to coordinate without shareholder primacy, thereby preventing our society from evolving in harmony with our natural environment. Therefore, we must strive to organize ourselves via fully evolutionary systems that can coordinate both intrinsically and extrinsically within the larger evolutionary systems in which we live.

As a first step, we must discard the evolutionary delusion of Lamarckism that has held a firm grip on Organization and Strategy for the past century, where evolution can simply be acquired, controlled, guided, or otherwise directed as an act of sheer management will. EI provides the foundation for this first step, as well as a roadmap for future research focused on its coordination bottlenecks. Organizations must make this paradigm shift to integrate the four core evolutionary lifecycle mechanisms of retention (via growth and preservation); deviation (via recombination and mutation), diversification (via incubation and maturation); and selection (via competition and survival). Until then, evolution will continue to

operate only above the organization level as organizational ecology theory has so enduringly explained. *That is because only species evolve, not individuals. EI is how the organization can transform itself into a digital species.*

EI provides a clear visualization of a much-needed theoretical bridge between Organization and Strategy via OA theory, DC theory, and the multidisciplinary theory of evolution. However, both Organization and Strategy unfortunately remain firmly rooted in the now obsolete tradition of shareholder primacy, which diametrically opposes multidimensional coordination, and hence strategic resilience.

Even when this primacy is successfully challenged after exposing the undeniable existential threats and wicked problems triggered by capitalism, euphemistic OA and DC theories popularized by Organization practices step in to deflect the challenge. Capitalism's management agents are then hagiographically glorified to emphasize their "moral leadership" and heroic ability to orchestrate paradox-defying evolutions of their corporations. Under their dictatorial strategic control, corporations are somehow imagined transcending all ambidexterity tensions and strategic paradoxes – and even violating their legally mandated commitment to shareholder primacy, via a continuous cycle of masterminded metamorphosis. This cartoonish Lamarckian folktale is ultimately all that still sustains the foundational management-driven premise of both Organization and Strategy today. That is because the existential threat of evolutionary failure that faces nearly all organizations has already been empirically established and widely conceded [\[3\]\[4\]\[5\]\[6\]\[7\]](#).

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