

Trust platforms: The digitalization of corporate governance and the transformation of trust in polycentric space

Larry Catá Backer (白 轲) 

Law and International Affairs, Pennsylvania State University, University Park, Pennsylvania, USA

Abstract

This contribution considers the revolution in the concept and practice of trust in corporate governance that first moved from trust in “people” to trust in “compliance,” setting the stage for the digitization of trust measures and the digitalization of compliance. Part One examines the fundamental challenge, one that arises from the near simultaneous shift in cultural expectations about trust from trust in character to trust in measurement, and then the rise of cultures of data driven systems of compliance and accountability. Part Two then considers the transformation brought by challenge responses in the form of three closely interlinked impulses: digitization, digitalization of compliance-accountability regimes, and the emergence of platforms as spaces for trust interactions among stakeholders. Part Three then examines the current shape of these iterative dialectics, including connections between platforms and polycentric trust governance, and the detachment of trust from the entity that is its subject.

Keywords: accountability, corporate governance, digital platforms, digitalization, trust.

1. Introduction

“Man uses the spoken or written word to express the meaning of what he wants to convey. His language is full of symbols, but he often employs signs or images that are not strictly descriptive ... Man ... never perceives anything fully or comprehends anything completely ... No matter what instruments he uses, at some point he reaches the edge of certainty beyond which conscious knowledge cannot pass.” (Jung, 1964, pp. 20–21)

Since the 12th century, and within its construction in Germanic languages including English, *trust* was understood as a relational concept (Etymology Online, [n.d.](#)). On the one hand, it was grounded in reliance by the person or institution extending trust; that reliance included at its inception a connection to faith in character of the object of trust. On the other hand, it referenced the character of that faith or reliance, that is, what made the object worthy of trust: “the veracity, integrity, or other virtues of someone or something” (Ibid.). Trust expresses both the faith (by those who trust) and “fidelity or faithfulness” (good faith) of those worthy of such faith or reliance. To be trust-worthy, then, implied a mutual embrace of shared values and the expectation that those values would direct and govern the activities of the parties. “our trust in *y* is based on our trust in our beliefs about *y*, which is based on our trust in the sources (often social) of those beliefs” (Castelfranchi & Falcone, 1998). The objectives of trustworthiness in corporate governance modulates from one based on individual trustworthiness to one based on trust in systems of governance quality; the character of the modulation, in turn, reflects digitalization of corporate governance performed against polycentric governance orders, most recently in the area of human rights (Quijano & Lopez, 2021).

Trustworthiness produces a critical organizational *consequence*—the confidence to engage in relationships and ultimately to maintain the coherence and operations of collectives (Bodó & de Filippi, 2022; Pettit, 1995). This core premise of trust defined the fundamental principle around which the legal effects of relationships, and its premises with legal effect, could be constructed around risk mitigating systems of trustworthiness. One merges

Correspondence: Larry Catá Backer, Law and International Affairs, Pennsylvania State University, 239 Lewis Katz Building, University Park, PA 16802, USA. Email: lcb11@psu.edu

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here what Luhmann might have thought incapable of amalgamation—the belief premises of confidence systems and the risk assessment premises of trust systems (Luhmann, 1990; Rodriguez, 2007). The mechanics of trust and its confidence enhancing consequences have institutional and regulatory significance (Pettit, 1995, pp. 220–225) (history of iterative predictability and replication, loyalty, and independence manifested as an ability to act). Trust as reliance and faith in character, and the expectations that this produced, were deeply embedded in the law of corporations as it developed in the United States (one notes, however, a generalized convergence of notions of director duties in European and Chinese systems; e.g., Gerner-Beuerle & Schuster, 2014, 199 (Europe); Xu et al., 2013; see also Amatucci, 2015, 105 [“une tendance, tant dans l’ordre juridique américain qu’italien, en faveur du déplacement du barycentre des fonctions de l’organe d’administration vers la surveillance, envisagée dans le sens que nous avons présenté” (trans: “a trend, both in the American and Italian legal order, in favour of moving the barycenter of the functions of the administrative body toward supervision, considered in the sense that we have presented”])).

An important element of trust was to manage (and reduce) risk in transactions (Arrow, 1974). Another important manifestation was in the way the law developed around expectations of trustworthiness—of directors, and of the employees and other stakeholders within the enterprise; and therefore to some extent of a confidence in the lawful and authoritative operation of the enterprise. Enterprises were once understood to be as trustworthy as the sum of the trustworthiness of its human resources, and on that basis they could be relied on (or presumed in law) to operate with fidelity to the great public values of society. Its essence was expressed well in the resistance of courts to impose positive obligations of monitoring and surveillance on corporate directors.

On the contrary, it appears that directors are entitled to rely on the honesty and integrity of their subordinates until something occurs to put them on suspicion that something is wrong. If such occurs and goes unheeded, then liability of the directors might well follow, but absent cause for suspicion there is no duty upon the directors to install and operate a corporate system of espionage to ferret out wrongdoing which they have no reason to suspect exists ... If he has recklessly reposed confidence in an obviously untrustworthy employee, has refused or neglected cavalierly to perform his duty as a director, or has ignored either willfully or through inattention obvious danger signs of employee wrongdoing, the law will cast the burden of liability upon him. (Graham v. Allis-Chalmers, 1963)

Trust, then, was both presumed and manifested in and through individuals. It was qualitative in the sense of privileging character and was premised on the assumption that people ought to be trustworthy until they produce evidence (of conduct or character) that overcomes the presumption. This is a notion that survives still, for example, in the mechanisms for licensing professionals which remains grounded in the individual, in character, and in the (political and individual) therapeutic (Sloane, 2001).

That was 1963. Nonetheless mimetic iterations of governance trust tropes do not produce reproduction (Benjamin, 1935), nor must one read causality into the pathways of mimetic reproduction (Backer, 2024). By 1996, faith in trustworthiness of the enterprise of and in the key actors responsible for its operation had eroded (Le Grand et al., 2008). This erosion occurred alongside the erosion of faith in the trustworthiness of the state (Weiskopf & Willmott, 2013). The locus of trust migrated as well. It moved from a focus on people as the objects of trust and a faith in their character as the touchstone of trustworthiness, to a faith in accountability and a reliance on the perfection of systems of monitoring and surveillance from which an accountability grounded trustworthiness could be enhanced (Dai, 2021, forthcoming; Frink & Klimoski, 1998). Character was no longer presumptively trustworthy; inference from evidence, what could be measured and assessed appeared to provide a sounder basis for evaluating trust. Trust and accountability became intertwined (Ammeter et al., 2004). That intertwining found expression in the fiduciary duty law of corporations (In re Caremark International Inc. Derivative Litigation, 1996; in its contemporary form in Stone v. Ritter, 2006). The Chancellor in *Caremark* first embraced the concept of trustworthiness of individuals as having legal significance (In re Caremark, supra, 698 A.2d at 969–970). He then noted the shift from the reliance on personal trustworthiness to the trustworthiness of accountability systems grounded in the assessment of the good faith of persons in crafting and operating systems of enterprise accountability based on monitoring and surveillance (confirmed in Stone v. Ritter, 2006); trust in the system produced the standard against which the good faith (trustworthiness as fidelity or faithfulness) of those charged with its operation would be judged (Ibid. [the standard: “fails to act in the face of a known duty

to act, demonstrating a conscious disregard for his duties”)). Law now assumes and privileges an alignment between trust (worthiness), legal compliance, and accountability (Nooteboom, 2002). “Thus, I am of the view that a director’s obligation includes a duty to attempt in good faith to assure that a corporate information and reporting system, which the board concludes is adequate, exists, and that failure to do so under some circumstances may, in theory at least, render a director liable for losses caused by non-compliance with applicable legal standards” (In re Caremark International Inc. Derivative Litigation, 1996, 698 A.2d 970).

By the second decade of the 21st century, trust in the enterprise was substantially understood as a function of trust in its system of accountability (De Haan & Bardoel, 2011). This transformation mirrored a general shift in governance away from a reliance on the premise that people act lawfully. The 2021 proposal by the U.S. Treasury to IRS to monitor bank transactions over \$600 was grounded in these changed baseline expectations of trustworthiness: “In September, Sen. Cynthia Lummis (R-WY) challenged Yellen during a Senate Banking, Housing, and Urban Development Committee hearing, asking her: ‘Do you distrust the American people so much that you need to know when they bought a couch? Or a cow?’ (Cole, 2021).” That trajectory mirrored efforts in China to develop a data based comprehensive social credit system to enhance trust and trustworthiness through mechanisms of ratings tied to rewards and punishments (e.g., De Jonge, 2021). Though outside the scope of this essay, the trajectories of Chinese social credit and trustworthiness in corporate governance might be understood as converging (Backer, 2018). Likewise, it is possible that the mechanics and sensibilities of the thrust toward quantification of functionally differentiated aspect of trust advantaged or social ordering behaviors, some starting decades earlier (Polillo, 2011), evidenced alignment of some sort of alignment (Ftiti et al., 2022), perhaps around the concepts of descriptive and predictive risk assessment (The Basil Committee on Banking Supervision, 2000) with the movement toward trust mechanisms within corporate governance evidenced, for instance in the U.S. caselaw described above. This may be particularly evident in the connection between the movement toward the quantification of financial creditworthiness in the United States (Lauer, 2024) and its mechanisms and broader application both in the Chinese social credit context (State Council of the People’s Republic of China, 2014) and in the compliance and accountability context elsewhere (Backer, 2020). The nature of the connection may be dependent on one’s baseline for operational analytics: one might read into that convergence a linear and certainly a causal relationship; one might also understand that alignment as an expression of an iterative pattern, the mimetic dialectics of which produced the tropes and practices of the current stage of historical development.

Trust in an enterprise, and the individuals responsible for its management and operation, itself also became manifested in systems of accountability beyond the enterprise itself; trust systems became an exogenous constraint on or factor in governance like crypto economics (Schneider, 2022). One could trust an enterprise because a trustworthy third-party certified trustworthiness and could hold the enterprise to account (Meidinger et al., 2003). Those systems of accountability, in turn, produced a law of good faith (fidelity and faithfulness) that could be used to seek remedies from individuals responsible for the trustworthiness of the enterprise and of the systems of accountability necessary to ensure such trust. The reciprocal relationship between those who trust and the trustworthiness of the object of trust thus became substantially more abstract. At the same time, it became increasingly tied to accountability (of individuals and institutions) and compliance systems whose basis in expectations and values could vary, producing not just variability in the meaning and normative performance of trust but also multiple regulatory sources for authenticating trust (Chang et al., 2006, pp. 25–64). That reciprocal relationship between those who extend trust and the trustworthy became more generalized as the core premise of enterprise trust were manifested in the laws of mandatory disclosure (Cossart et al., 2017), in the rules for exercising prosecutorial discretion against enterprises, and in the expectations of enterprise trustworthiness with respect to legal and normative responsibility (Smit, Holly, & McCorquandale, 2020; United Nations, 2011). This last was also tied to principles of risk and risk avoidance through the “prevention, mitigation, and remedy” principle embedded. For example, in the UN Guiding Principles for Business and Human Rights principles around human rights due diligence (Fasterling, 2017) and more generally around corporate governance and risk management (Kalia & Gill, 2023).

This move toward regulated self-regulation of trust in enterprises and their personnel and operations (Schulz & Held, 2004), undertaken through accountability and (legal) compliance and risk mitigation, produced challenges of information and analytics as the mechanics of this movement. If faith or reliance on veracity, integrity, or other virtues was the basis of trust, then it was necessary to define those terms, and to determine how one

might measure them against an ideal of trustworthiness. Where once that was understood as essentially a qualitative measure, one triggered by knowledge of conduct deviation (Allis Chalmers, *supra*), increasingly the systematization of trust within the structures of compliance-based accountability shifted methodology to quantitative measures represented by the trustworthiness in systems of ensuring enterprise trust (Stone v. Ritter, 2006). That shift was made possible by significant advances in technology and a growing appetite for quantification and assessment against societally (or legal) constructed ideals. Trust, then, and especially trust in enterprises appears to have started moving from a faith in alignment of values and their application to enterprise conduct of those judged trustworthy, to assessment based on the quantification of deviation of data from an ideal.

In this sense, the concept of trust meandered from faith or reliance to a data driven assessment (Porter, 1996). That turn to assessment, in turn, appeared grounded in analytics based on the calculation of (acceptable and unacceptable) deviation from the ideal of trustworthiness (in the context in which it was deployed). That movement, in turn, appears to have produced incentives toward efficient marshalling of data as the necessary predicate for the operation of the quantitative analytics at the heart of accountability systems, the assessments of which are now instrumental in the construction of enterprise trust. This movement toward data-based quantification in assessment and accountability produced a parallel movement toward digitization, that is the process of converting information into digital form. That digitization is an essential iterative addition, the application of which changes the mimetic mix that, to those whose interpretive lenses are fixed on causative relations, may appear as a step in the process of developing and operating the analytics necessary for trust assessments through accountability measures. This is part of a general trend in the digitalization of economic activity and its institutional structures (Gobble, 2018). Datafication has sometimes been used as a general descriptor of the use of digitization to aid in the transposition of qualitative measures to quantitative data (Mejias & Couldry, 2019).

The turn to data digitalization has shifted the process of demonstrating trust from presumptions of trustworthiness that must be overcome to the analytics of trust generated through the production of internal digitalized data metrics; it also marked a shifting from internal accountability systems to digitalized services in trust (Alves et al., 2012). The turn to quantification, datafication, then provides a language and approach to the use of datafied subjects to produce analysis and judgments (assessments), one of which is trust (now translated back in the form of a judgment, to the analogue). Those in turn, are consumed internally by corporate actors as well as externally by consumers, creditors, regulators, and the public (Josang et al., 2007)—that is trust itself (or trustworthiness as a conclusion) is utilized through platforms (OECD, 2019, 20). Trust in enterprises, then, becomes a conclusion (an assessment) which is ideologically informed (Tetlock et al., 2013). That objectification of trustworthiness is in turn based on the application of analytics to accountability systems operated internally and externally to develop not just assessments of trust, but also trust ratings. These, in turn, produce platforms for the rating of trust rating, and so on (Banerjee et al., 2017).

This transformation of the object and character of trust in enterprises brings intertwines three related themes the examination of which is the objective of this contribution. The first touches on the digitalization of corporate governance expressed through the ideologies of corporate accountability and compliance (Backer, 2020). This digitalization is expressed as data driven governance expressed through algorithmic analytics and operated within platforms (Backer, 2018). One must now trust the technologies of trust (analytical quantification systems) to produce assessment of enterprise trustworthiness (Porter 87–190). The second examines the way that these changes affect the character and expression of trust in these entities and their governance (Anderson, 2019). Trust has been subsumed within cultures of compliance and accountability and infused with the animating principles of prevention-mitigation-and remediation (O'Brien, 2019; Swift, 2002). Trust is informed by the capstone architecture of cultural hard wiring—the principles (embedded in “coding” language of law, for example)—and its digitalization changes its application (chapters in Braithwaite & Levi, 2003). It is the way in which old law sensibilities are embedded into systems of digitalized governance—the elaboration of systems of translation and transposition—that may ultimately shape the way that trust in institutions are undermined, or the measure of that potential reshaped. It is a small step from digitalization and assessment to modeling and predictive analytics of trust and trustworthiness (Tan & Thoen, 2014). The third then explores the polycentric element in the construction of these data driven governance principles and practices, that reconstitutes the trust-accountability nexus within trust platforms (Ostrom, 2010; for a conceptual history, see Aligica & Tarko, 2011). Polycentricity, generally understood at its broadest as a social system (or ecologies of social systems) of multiple decision-centers

of varying autonomy operating within overlapping spaces of social relations, here functions not merely as an expression of that diffusing and overlapping of governance, within a sub-set of social relations, but also in aligning governance within chains of responsibility delegation within systems of social relations sometimes organized by and through law (Backer, 2016a). Its fractures represent the effects of a politics of quantification (datafication) through digitalization the produce different problems of trust and different forms of control (Fligstein, 1998) and its manifestation in the construction of multiple systems each of which is both an instrument of trust making and the object of examination for trustworthiness in its own right (Spiegelhalter, 2017).

The interconnection between these themes frames the thesis of this contribution: Emerging cultures of accountability and compliance have shifted but not undermined the objectives of trustworthiness in corporate governance from one based on individual trustworthiness to trust in systems of governance quality, a shifting that has been enhanced and is being shaped the digitalization of corporate governance and the emergence of a polycentric order of transnational regulations (e.g., human rights due diligence instruments) (Marcuse 1982, 147). While widely recognized conceptions of trust inform systems of decentralized, digital governance, the principles and practices of such governance recasts trust and its relationship to accountability within corporations. The argument made here is that this leads to what might appear as contradictions between traditional systems of faith in the trustworthiness of the enterprise and its principal (human) manifestation, on the one hand, and the emerging faith in the trustworthiness of systems of accountability from which enterprise trust can be objectively measured against an ideal-type, data-based metric (Sassen, 2021; Sassen & Kourtiti, 2021) (closed systems that are generic and grounded in surveillance). Indeed, digitalization inverts the relation between the mechanisms trust and its traditional object. Trust in enterprises, then, become a function of trust in trust accountability systems. Competition among such trust accountability systems and the norms from which trust is measured produces polycentric regimes of transnational corporate accountability, and of measuring trustworthiness, that simultaneously enhances (through systems of exogenous objectification) and undermines (through incompatible standards and methods of trustworthiness) enterprise trust (Bodó & de Filippi, 2022). In this respect there is a parallel with but not a convergence of, trust measuring and financial ratings measures (Hilscher & Wilson, 2017; Sandberg et al., 2022). It touches as well on the interconnection between movements toward decentering the role of the state as regulatory as well as polycentric regulation which recognizes the regulatory power of collectives beyond the state (Black, 2008).

This thesis is closely examined through the lens of contemporary efforts to develop a law of mandatory human rights due diligence for enterprises. The movement toward the legal regulation of human rights due diligence illustrates the movement from trust in enterprises as they built their supply chains to a distrust of those enterprises, at least in their capacity to respect human rights throughout those chains. Trust was refocused from one that was centered on faith in the trustworthiness of enterprises and a presumption of (faith in) all actors in the supply chain to comply with their responsibilities, to one that focused on the construction of systems of accountability from which trustworthiness could be determined. That movement ultimately was systemized at the international level through the soft law instruments of human rights due diligence built into the UN Guiding Principles for Business and Human Rights (2011). That trust in due diligence mechanisms as the objectification of trust assessment produced the development measurable systems of diligence and their analysis that dovetailed with the emergence of digitalized enterprise governance. The due diligence mechanisms were then detached from the enterprise itself. That produced a double trust issue: first, the trustworthiness of the enterprise based due diligence assessments measured against an ideal, and second, the trustworthiness of systems of assessment. Digitalized trust systems in this sense effectively reproduce a blockchain like space (Davidson & Potts, 2022 [technologies that industrialize trust]) in the design of accountability as a techno-social system (Bodó, Brekke & Hoepman, 2021b). A polycentric element was added where the systems of trust assessment (compliance with the requisites of human rights due diligence) were undertaken by private third-party enterprises applying simultaneously multiple domestic, private, public, and international standards systems (Backer, 2012). Trust enhancement then produced a movement back from privately ordered trust assessment to publicly managed legal compliance by transforming the issue of trust from a markets-based and relational issue to a regulatory one overseen by the state (Bayern, 2021; Bright et al., 2020). The character of that transformation was well evidenced in the 2021 efforts to develop and enact a human rights due diligence system overseen by the state in Germany and within the European Union (Mateus de Albuquerque, 2019). The consequence: the state, ultimately, becomes the

trust platform through which enterprise trust authenticating systems operate (Dai, 2021, forthcoming) reducing and managing risk exogenously (Smit, Bright, et al., 2020).

This Part One described the problem and the challenge, one that arises from the near simultaneous shift in cultural expectations about trust from trust in character to trust in measurement, and the rise of cultures of data driven technologically complicated systems of compliance and accountability. Part Two then considers the transformation brought by efforts to respond that challenge. These consisted of three closely interlinked trajectories: digitalization, complex compliance-accountability regimes, and the emergence of platforms as the space within which collectives of consumers and producers of governance and trust related data could interact. Part Three then considers the current manifestation of these iterative dialectics by examining the structures that have emerged as a product of those trajectories. The first is the constitution of polycentric governance standards around which entities must now navigate and the second is the detachment of trust from the entity that is its subject. That is, it considers the rise of trust platforms as the autonomous point of engagement through which the trustworthiness of corporate governance is negotiated (Backer, 2016b).

2. Trust transformations—normative digitalization

Part One of this contribution, then, first examines the forms and trajectories of data driven tech-based governance and its effect on the way in which core objectives—like trust—are recast. The object here is to establish the principles and premises that mark the migration of the notion and performance of trust (Butler, 1996) from its traditional normative basis in the assumption of trust (in persons) to the assumption of the absence of trust (in persons) and the construction of trustworthiness from out of the assessment of acts and objects that constitute the work, objectives, and cultures of corporations. In both cases, the trajectories point to the means of enhancing confidence by detaching the object of confidence from its measure (datified *trustworthiness* as a risk management measure). In this section, the three intertwined trajectories of enterprise trust are elaborated. These three trajectories are digitalization, compliance, and platforms (as networked accountability spaces). Recall from the Introduction, the impetus that gives these trajectories their special character and its intimate connection to the calculus and presentation of trust—as a condition (trustworthiness), as a performance (the behaviors that signify trust) and as an object (those who can be trusted from institution to its principal stakeholders). One starts at the end—the need for objectively verifiable measures that calculate both trustworthiness and the means to assess its value in and of itself and in relation to trust seeking entities. *Digitization* defines the objects, events or conditions that merit counting and that serve as the universe of the constituent parts of the thing to be assessed. *Digitalization* embeds and realizes the ideology and modalities of measuring and valuing trust by reference to its “digits”—its objects of value for that enterprise. *Compliance* provides the basis on which that value can be calculated and the objectives toward which value is dependent. *Platforms* provides the means of detaching the exercise of trust making and its accounting from the objects of measure (the corporation) to a network/market that itself produces and regulates the production of trust measures. Polycentricity appears in each of these stages where an object of trust measurement and assessment may be subject to multiple distinct regimes of digitization (differing data fields), digitalization (consonant and incompatible analytics), compliance (different legal or market expectations), and platforms (functionally differentiated trust assessments for example human rights and sanctions compliance realized through politically or functionally differentiated fields of activity).

2.1. Digitalization

The term “digitalization” has become something of a fetish object from the perspective of semiotics. It is usually connected with, but not the same as, the term digitization. Both, at their cores, are terms grounded in their reference to digits (from the Latin “digitus” for fingers or toes) in a way that is meant to suggest not merely counting, but also *process*, that is how counting is attempted. The term is the means of incarnating something wholly abstract—an objectification that signifies the essence of value (a number for example, or an act that itself embodies value)—by reference both to the body and to its function. The action is better understood when separated into its two distinct parts. The first is *digitization*. Digitization is the name that is given to describe the process of the action of digitalizing. It describes the act of converting physical information into digital (machine

readable) forms. To digitalize, then, at its most basic, is understood as the act of transforming something into a sequence of digits—that is to convert objects (including action) into formal manifestations of *value that can be counted, or of counting things that (singularly or in the aggregate) can be valued* (on the critical role of conversion in cognition see Broekman, 2023; Backer, 2024). The second is *digitalization*. Digitalization is the word that is used to describe the processes of using digitized information for specific purposes that supplements or supplants analogue systems or processes. Digitalization, then, focuses on the consequences of digitization (which now serves as a language that manifests an ideology for recognizing physical objects or processes that matter—an approach to the way things are made to relate and operate in the world). Digitalization refers to the way that digitization restructures domains of social life, including in this case, corporate governance (Brennen & Kreiss, 2016). At its outer edges, and with the technologies of generative intelligence, digitalization can evolve into digital transformation, integrating digitalized processes into all aspects of operations (Verhoef et al., 2019).

An example: At a very basic level, the smart home is both site of and the process of digitalization that transforms the way individuals relate to their environment for everything from entertainment to climate control, child and elder care, surveillance, and the like. It also produces a wealth of data that itself then serves—individually and in the aggregate—to make the smart home “smarter.” This smartness is evidenced by suggestions grounded in the use of data to build models that then assess and can be used to predict the relationship between action and consequence as a function of goals, objectives, or norms which are given precise values (e.g., in the case of the smart home they would include comfort, security, sustainability, and compliance). Travel apps merge the technological rationalization of going from one place with digitalized standardization “in the service of comfort, safety, and efficiency [that excludes] any individual experience or alternative points of view” (Musik & Bogner, 2019, p. 3).

That example makes it easier to understand the role of digitalization in business and the social construction of technology now digitally framed (Bijker et al., 1987) or mutually constituted (Zhao, 2005).

For example, in the business domains, digitalization often informs what and where to buy and sell, how to advertise, how to efficiently produce and transport, and how to keep contact with the customer. In production mode, digitalization also means to design products in a digital form, to virtually compose and exercise components before producing the product, and to maintain the relationship between a sold or rented product, its users, and the producing company. (Gray & Rumpe, 2015)

This also aligns with another apparent trajectory of digitalized business models—from outputs to *servitization* models (e.g., where an object becomes a point of service, for example, where income for the sale of a mobile phone is augmented by the provision of maintenance, repair, and support services at additional charge) (Kohtamäki et al., 2020). Digitalization in the business context develop in mutual reflexive interaction—each giving meaning to the other in the context in which they interact (Barad, 2003).

From this it is easy to understand the process of digitalization of corporate governance as a movement from a qualitative and normative framework for assessing corporate activity, to one increasingly founded on quantitative and value-based objectives assessment. Those quantitative and values-based assessments can be measured; they can be built into the models that serve as the elements that animate the digitalization of governance. Externally digitalization informs corporate decision making by rationalizing the fact universe necessary for risk minimizing value maximizing choices; internally digitalization structures the way that decision making information is gathered and analyzed, and, perhaps more importantly, the way that information producing people and processes conform to quality and fidelity parameters (quality control and conformity to duties of care, loyalty, good faith and disclosure up the chain of authority). Digitalization provides the basis for the maintenance of information symmetry that itself can be measured and assessed.

It is not that normative frameworks disappear. Quite the contrary—normative value becomes more pervasive; “there is not only one way of doing digitalization; there are many more that align with other values and other cultures such as those of the US-American. The highlighting of ‘European values’ might be also interpreted as a political answer to widespread fears regarding the disruptive and alarming effects of digitalization” (Musik & Bogner, 2019, p. 2; a point elaborated *infra*). This has implications for many areas of corporate governance, including the shareholder-stakeholder value models (Nost, 2022; Dan-Adzaklo & Wong, 2024, p. 5). But its pervasiveness is now more deeply embedded and less obvious. Part of that phenomenon of embedding is grounded

in the (mis)alignment between conceptions of information and of data. “Our use of information technology in general is a source for confusion and we tend to see information as a product of technology, while information in essence contains subjective ‘interpretation’ of objective facts. The American influence reinforces this view as the difference between data and information is hardly addressed. In essence, information is a human interpretation of objective facts or data” (Beijer & Kooper, 2010, pp. 7–8).

The normative—and its disciplined subjectivities and premises—disappears into the assumptions for the calculation of value of objects measured (as against each other). For example, specific normative baselines are essential for valuing diversity in the context of productivity. It identifies ethical positions that ought to be advanced (e.g., loyalty to the enterprise) and those that should be suppressed (e.g., gender superiority). The normative provides the unstated assumptions that guide the choices from which objects and actions are identified for valuation; for example, male and female but not other gender categories. Nonetheless, the normative is expressed in and through its “digits,” the actions of individuals and the character of the structures within which those individuals act. The valuation-assessment function is not limited to the objects and consequences of digitalization; digitalization itself can be measured in accordance with its own logic (Kotarba, 2017).

There is inherent in the trajectories of digitalization an alignment with the normative core premises of financial accounting: that acts and objects can be valued, that a universe of value based acts and objects can be identified; that the interactions of such acts and objects can be rationalized against “higher values” (in the case of financial accounting in markets based economies that of profit); that it is possible to judge performance of the whole and the parts of this operation both over time (the enterprise judged against itself) (Abou-foul et al., 2019) as well as against similarly situated unrelated enterprises in the same field; and that a rule-value system can be generated that provides the basis for investing this project with meaning (as well as with its rationality). The process of digitalization, then, moves the evaluation of the governance of the enterprise from the subjective to the objective, from an art to a science, and from the nuance and discretion inherent in qualitative assessment to the supposed neutrality, comparability, and transposability, of empirics.

There are a number of key actors and actions that suggest the contours of digitalization in the space of trust and corporate governance. A recent broad survey of about 800 global boards of directors revealed common trends in digital transformation in the shadow of the COVID-19 pandemic. At its broadest this survey revealed that “[m]ore than 90% of directors in Vietnam reported that their boards were actively exploring new digital tools, compared to 76%–79% of directors in Thailand, Japan, and Malaysia; 67%–70% of those in China and Singapore; and just 64% of those in the U.S.” (David & Farzan, 2021). For example, board meetings, once almost exclusively in person, moved almost entirely to virtual format and after the pandemic may remain operating in hybrid form. The move to virtual meetings might be understood as digitization. Digitization describes a process of iterative migration, from the analogue coding of human language to bytes or other media that are stored and may be retrieved from virtual spaces (computers, storage devices, monitors, etc.). Digitalization, then, may be understood as the technologies through which digitized objects (information in any form) may be utilized in intended ways again usually through processes that themselves depend on digitized data including the technologies for their use (Gobble, 2018). Digitization speaks to data (as the virtual form of useable knowledge), the other speaks to systems of engagement that leverage what is digitized (i-SCOOP, 2016) in ways that resemble (mimesis) in ways that can be replicated (iteration) to approach an intended value field (trust in this case) (Dak-Adzaklo & Wong, 2024).

The range of iterative representation can begin to be observed. In ways that produce a broader and more distinct set of dialectically derived patterning of corporate governance (Seete, 2022). Among the more interesting are trajectories of indexing, which combines digitalization and quantitative measures overseen by third parties that focus on aligning target measures with trust in corporate effectiveness (e.g., Bebachuk et al., 2009). David and Farzan (2021) suggest several others. First, the administrative costs and habits of boards and board actions have been transformed with respect to everything from signatures on consents, to accessing information, to the circulation of board papers and the like (ibid). Second, all board action undertaken in digital space can be recorded, and once recorded can be used to assess actions or can be disaggregated to discrete data points that then serve as the fuel for algorithms of performance and evaluation. Third, digitalization produced incentives for outsourcing increasing reliance on third party providers for digital pathways. David and Farzen noted, for example, that “our research found that more than half of global boards were still using general tools such as Google Meet, Zoom, or WeChat for virtual meetings, rather than systems specifically designed for digital board governance. Few boards

we spoke to had updated their approaches to vital board-specific processes such as sharing secure governance documents, voting, or communicating confidential information” (ibid). Digitalization, then, increases the cybersecurity threats and builds board cultures around security and integrity of board actions and their memorialization (ibid., 83% of board members cited cybersecurity as a top priority). Where digitalization assumes a “mission critical” role in the operations of the enterprise, board liability with respect to those systems may increase as well (In re Boeing Co. Derivative Litig., 2021). The board meeting example suggests the breadth of change, one that suggests an ordinariness to expectations of digiti- and digital-ization in board operations. That seems to be the central teaching of Marchand (2019; “Here, the plaintiff did as our law encourages and sought out books and records about the extent of board-level compliance efforts at Blue Bell regarding what has to be one of the most central issues at the company: whether it is ensuring that the only product it makes—ice cream—is safe to eat”; ibid., slip op. at 32) The threats are compounded as artificial intelligence based systems are integrated into board surveillance and decision-making, where the objects of trustworthiness shift again from compliance to generative AI program integrity (e.g., Bruner, 2022).

Digitization remains the foundation—when badly done—digitalization transformation falters. Sometimes that is a function of “bad data.” “COVID-19’s impact revealed that supply chain business continuity plans had both the wrong data and the data wrong. Top management literally couldn’t see what was happening—or needed to happen—to ensure safe and reliable deliveries under duress ... Data, not digitalization, was their immediate problem. Decisions around data—not digitalization—drive successful supply chain transformation.” (Schrage, 2020). Sometimes that is a function of “bias” (Lopez, 2021). That inability to “see what was happening” accurately also contributes to another of the fundamental culture defining characteristics of digitalization—the emergence of outsourcing of the analytics at the heart of digitization. Outsourcing can include every aspect of a digitalized process or activity for the development of apps, to security, to the construction and application of analytics and the algorithms necessary to convert the process of deriving meaning from data to its assessment (Steinberger, 2020). And this produced a further development that has implications for corporate governance—the rise of digitalized third-party monitoring and compliance mechanisms through which trust is built and maintained and projected outward from entity to stakeholders (Savilaakso et al., 2015; “build trust between different stakeholders and enact together in response to changes”; Ibid., p. 7). Prominent among these are the auditing function—which includes both internal auditing measures (Vasarhelyi et al., 2015) but also increasingly important external auditing by unrelated third parties (Manita et al., 2020). Digitalization of audit functions are said to transform the function from a cost to a value adding mechanism, in part by enhancing trust through detached accountability processes and by reducing informational asymmetries (Ibid).

The insight from the supply chain side is particularly instructive for the issue of digitalization of corporate governance. Among the most important of these were two points worth considering. The first is that digitization that merely converts analogue records and processes to digital form does little more than transpose the problem of information and analytics management from one format to another. Second, the essence of digitalization, in the context of corporate governance (and supply chains) is grounded in both actions grounded in conceptions of visibility and transparency (Ibid.; noting the example of Cargill as a company whose transparency and visibility measures both upended the traditional approach to supply chain information sharing and visibility). Visibility is understood as the task of identifying data and data configurations (objects) that are important (judgment that is a function of the conceptual universe in which identification is made). Transparency is understood as the commitment to making data and its analytics available to all stakeholders who share a critical need. Both have strong implications for trust: “Increasing supply chain visibility always strengthens consumer trust.” (Kraft et al., 2020; p. 29 in the context of the role of supply chain visibility in social responsibility communications). Digitalization of corporate governance, then, provides the technologically enhanced foundation for trust enhancing activity. It is activated, though—that is given meaning—only in the context of systems for assessment against which activity can be evaluated for alignment with trust positive or trust negative judgment. Compliance may serve to usefully frame that alignment between the cultures of data harvesting and its value maximizing forms.

2.2. Compliance

Digitalization, of course, is a critical but nonetheless only a formative factor in the iterative variability among corporate compliance forms that broaden possibilities from analogue only systems. Nonetheless the forms of

digitalization may also serve as a discursive cultural bridge (Barbeta-Viñas, 2024 [“We could say that discursive bridges ... are elements present in discourses that have the capacity to connect two discourses ..., even if it is by modifying the flow of their meaning.”] *ibid.*, p. 4). It provides a culturally comfortable process and an equally comfortable normative structure already embedded in the cultures of corporate internal quality control. In the context of corporate governance digitalization is nicely aligned with an expected mechanics of accountability but now one better refined through systems of measurement that purport to be void of presumption, or at least that can be liberated from presumption that inhibits clear analysis (Calder, 2019).

Nonetheless, a normative direction is necessary to make this empirics machine operate usefully. The machine produces value in its own right as a function of its ability to identify and take the measure of objectives, and performance against a normative baseline. The highest value for this machinery, then, is trust in production of value assessments. Norms, then, assign both a meaning and a value to objects; objects are those data points selected for signification (given a meaning and a value); and signification is itself a function of the application of premises, principles, expectations, and ways of looking at the world in ways that align with the expectations of a community with a shared conception of meaning. Norms, however, must also be transposed from the analogue to the digital; value premises must be datafied; trust in a system of normative datafication against which normative analytics can be applied to assess trustworthiness of corporate conduct can then reflect trust in the assessment itself. Compliance is the mechanism that expresses these relationships in ways that can be assessed, and thus assessed. Systemic accountability serves as a trust enhancing form of quality control. Trust follows from that assessment as a function of the relationship between normative expectation and performance—legal, business, social, moral, and collective compliance. The extent to which the machinery of assessment is trusted to produce assessments of trust defines both the trustworthiness of the mechanism and the object of assessment. This, then, is *the realm of the mechanisms within which it may be possible to express trust institutionally in an authoritative way*. The real-life consequences for corporate actors can be quite real—for example, trustworthiness in the form of effective corporate compliance programs. This as embedded in the guidance issued by the U.S. Department of Justice in its Justice Manual on the exercise of prosecutorial discretion in charging business organizations (US Department of Justice, 2024, Title 9-28.700-1000) and its evaluation of corporate compliance (US Department of Justice, 2024).

The general parameters of this compliance mechanics have been nicely summarized in the American Law Institute’s project on compliance. Compliance is defended broadly to include law, norms, standards, and principles (American Law Institute, 2021). The definition states: “Adherence to applicable laws, regulations, rules, an organization’s code of ethics, its ethical standards, or legally applicable or otherwise binding industry codes of conduct, and appropriate cooperation with regulators.” (*ibid.*, ¶1.01(h)). Compliance is grounded in the alignment of compliance programs (*ibid.* §1.01(m)), risk (*ibid.*, §1.01(n)), and risk management (*ibid.*, §§1.01 (o) and (u)). In turn, compliance programs are defined as “A set of specific rules, procedures, authorities, standards, practices, and requirements that implement the compliance policies and procedures within an organization.” (*ibid.* §1.01(m)). Risk is defined as “The risk that an organization will experience financial or reputational losses or legal sanctions or other negative consequences because of its unwillingness or failure to follow laws, regulations, rules, its code of ethics, its ethical standards, or legally applicable or otherwise binding industry codes of conduct, or to cooperate appropriately with regulators.” (*ibid.*, §1.01(n)); and risk management describes the management of a company’s compliance risk “through or in coordination with its risk-management function and risk-management program, and through or in coordination with its compliance function and compliance program.” (*Ibid.*, §§1.01 (o) and (u)) The compliance obligations of the enterprise are made accountable through mechanics of internal audit (*Ibid.*, §§1.01(dd)-(ff)), and external control is defined as “A function performed by persons outside the organization that is designed to provide reasonable assurance regarding the achievement of objectives relating to compliance and risk management.” (*ibid.*, §1.01 (x)) (US Department of Justice Criminal Division 2023, evaluation criteria for corporate compliance programs, qualitative categories for quantitative assessment).

Data management is at the heart of the compliance function: “Among the techniques available to an organization in its identification of compliance risks are data-gathering and data tracking, surveys, questionnaires, facilitated workshops, process analysis, analysis of performance indicators, interviews with operational and executive-level personnel, and research on key risk indicators and external risks.” (*Ibid.*, § 4.08 Comment b). It is operationalized through systems of monitoring. “Organizations also should regularly review and validate their

monitoring. An organization's review and validation should include an assessment of how well it gathers and analyses data." (Ibid., §4.11 Comment e). Lastly, corporate governance compliance is enhanced by the layering of administrative nudging with private law system building judged against legal standards for the exercise of managerial discretion and the character of corporate action. "Enforcement authorities can better address the twin challenges of obtaining the needed evidence and motivating organization to cooperate by adopting enforcement policies—and, when applicable, regulations—that enhance their access to evidence. Such policies include those that favor: (2) using data analytics to detect misconduct and identify wrongdoers" (Ibid., §6.25 Comment e).

For purposes of corporate governance, digitalized compliance might be usefully divided into two related but distinct categories: internal and external compliance. The first touches on the integrity of enterprise operations and the fidelity of those operations (decisions, actions, policies, and the like) to the enterprise's own operational standards; the second touches on the alignment of enterprise operations to the normative expectations of its outside stakeholders. These then provide the means through which digitalization (in the context of corporate governance and trust) is given direction. Digitization produces the records of events, responses, condition, thoughts, processes—anything that can be preserved and distilled into a useable form. This data can then be converted into information, facts cobbled together into bits of subjective interpretation (Beijer & Kooper, 2010, 7–8). As information it makes its way into reports or serves as data inputs for analytics. These reconstituted bits as information, or as objects that when developed through the application of analytics becomes information then serve as inputs to decision making. Decision making here is itself an exercise in analytics—one that must optimally balance objectives with risk. Those objectives can include compliance with law and norms; the exercise of duty to the entity; and the maximization of the value of the entity through the many actions that entities must take. Those exercises themselves involve complex networked decision making and accountability structures which themselves are rooted in digitalized analytics rooted, as was described in the introduction to this essay, in the fundamental ideology of norms-based accountability. It is important to underline here that the functioning of these networks is intimately aligned with the fundamental organizational ideology of corporate entities going back to late 20th century corporate governance theory: "that the hierarchical form of authority, which corporate law endorses by so centralizing power in the board of directors, is an efficient mechanism for managing network information flow in a complex organization" (Langevoort, 2006, 970; citing Clark, 1986, 24).

That, in turn, is based on the more fundamental premise of corporate statutes (e.g., Delaware (2023); § 141 (e)) that corporate fiduciaries may in good faith duty rely on corporate records "and upon such information, opinions, reports or statements presented to the corporation" by persons as to matters within their competence (ibid.). In re Caremark (1996) and its progeny Stone (2006) and Marchand (2019) suggest that reliance to extend to systems of informatics in the exercise of the care and good faith expected of them in the exercise of the operation of the entity. This has been transposed into statutory law (at least applicable to companies subject to US federal securities laws) by the Sarbanes Oxley Act (2002), which requires two discrete actions both necessarily shaped by cultures of digitalization (recall the fundamental principles of visibility and transparency). The first is reliance on data (quantification and datafication of decision-making); but with it the issue of quantification itself (e.g., Fenech et al., 2018 on quantifiability ["Given that AI is trained primarily on 'measurable' data, does reliance on AI risk missing non-quantifiable information that is so important in healthcare interactions?" Ibid., p. 25]). The second are regimes of accountability—quality control, auditing, and reporting (Backer, 2020; Moll, 2018). These include both formal and informal networks. It is to data, and within the premise that one can measure anything, that datafication aligned with compliance produces the fundamental basis for the constitution of trust (Backer, 2004; Langevoort, 2006) by framing a mechanism for assessing networks based decision making against idealized standards within formal and informal networks (Langevoort, 2006, 971 ["Surveillance technology has evolved considerably, and with the advent of e-mail and other forms of digital communication as primary network mechanisms, one could go quite deeply into the informal network"]). Boards of directors can be understood as virtual networks where monitoring is tied to learning and knowledge management (Bankewitz et al., 2016) the investment in which enhances trust and changes the character of governance. Trust is informed by the capstone architecture of cultural hard wiring—the principles (embedded in "coding" language of law, for example)—and its digitalization changes its application (chapters in Braithwaite & Levi, 2003). Trust is subsumed within the logic of both systems to construct an "ideal" against which metrics are created or for the preservation or protection of

which law systems are created (e.g. “no killing without permission of the state constrained by the state’s applies its core ‘right to kill’ principles” is then the basis for the criminal law of unlawful killing).

Compliance requires more than principles and presumptions; it requires standards that are mandatory in nature—either because they have the character of law or because they reflect expectations in the market among key stakeholders. In the context of corporate governance, compliance standards are embedded internally in the values and meaning-creating conceptions of fiduciary duty (imposed on corporate actors with authority to represent or incarnate the enterprise) through law. Externally they are represented by the polycentric constellation of law, norms, rules, and expectations (sometimes embedded in or operating through ecologies of platforms [Backer & McQuilla, 2021] against which the conduct of the enterprise is judged and against which key outside actors [public and private entities, consumers, regulators, and the like] and markets respond. These include human rights due diligence [in Europe mandatory regimes of due diligence] and otherwise derived from international soft law [United Nations, 2011]; environmental, sustainability and climate change standards [Martínez-Ferrero & García-Meca, 2020]; disclosure regimes [for example under Modern Slavery Laws; Wen, 2016]; and nudging from administrative rules for the exercise of discretion based on the development and utilization of data based monitoring and assessment systems to detect and mitigate risk [US Department of Justice March, 2024]; §9–28.800 [“While the Department recognizes that no compliance program can ever prevent all criminal activity by a corporation’s employees, the critical factors in evaluating any program are whether the program is adequately designed for maximum effectiveness in preventing and detecting wrongdoing by employees and whether corporate management is enforcing the program or is tacitly encouraging or pressuring employees to engage in misconduct to achieve business objectives.”]). These can be measured, and thus measured, assessed (Camerer & Fehr, 2002).

Compliance changes the character of trust as well. One moves from faith in an individual to do right, to the rationalization of “right” and its disaggregation into evidence of what constitutes “right.” Compliance is a trust building mechanism precisely because it serves as the mechanism through which a proper analysis of right can be applied to the constellation of data deployed for its measure. Trust, then, becomes a function of the integrity of compliance. The objects of compliance are trustworthy only to the extent that the system of compliance is trusted to produce robust measures of trustworthiness (American Law Institute, 2021). This shift from the object of trust to the process of determining trustworthiness is profound. And it is also possible only through the alignment of cultural shifts (from presuming to proving trustworthiness), technology (digitization, and the quantitative measure of trust), and the development of measurable objectives. And at its core, trustworthiness becomes an element of value creation (for the enterprise) even as it itself is used to value the core inputs that drive a positive value for enterprise integrity and for the value of the enterprise in markets (Porter & Kramer, 2011).

But against what is “right” to be measured; that is, what now constitutes the object that embodies trust toward which compliance mechanisms are aimed? The traditional measures were centered on the traditional core fiduciary values—care, loyalty, and good faith (Stone v. Ritter, 2006). Other measures focused on the core objectives of the enterprise (Bosch-Badia et al., 2013). Emerging international norms focus on principles of risk, primarily on *prevention-mitigation-and remediation* (O’Brien, 2019; Swift, 2002). Trust and accountability merge here into the integrity of the process of assessing compliance. The identity of trust and accountability is evident, for example in the approach of the Office of the High Commissioner for Human Rights: “Accountability has three dimensions: it refers to the obligation of those in authority to take responsibility for their actions, to answer for them to those affected, and to be subject to some form of enforceable sanction if their conduct or explanation is found wanting.” (United Nations, 2015), p. 4. Trust, in this context is measured against a corporate governance accountability structure that minimizes the risk of the occurrence of different sorts of events—ones depending on the normative system of idealized “right” in the foreground. These include human rights (whether grounded in domestic constitutional ordering or international standards under frameworks such as the UN Guiding Principles for Business and Human Rights [2011], or sustainability [Donald & Way, 2016]).

The centrality of the compliance-accountability-trust axis is becoming better understood in the literature, though its development remains dynamic. At the level of psychology studies have suggested the string collateral effects of symbols with trust and trust with external compliance (Murphy, 2004; Rafaeli et al., 2008). Other studies have begun to examine the migration of trust from object to process, and especially the processes bound up in compliance accountability structures (Pohl & Musil, 2020 [trust in science]) and risk (Olsen & Mahler, 2007

[trust and compliance with data protection law in Europe]). The future, however, points to the increasing use of big data models to develop predictive analytics that will aid in corporate governance in ways that can enhance measurability (and thus accountability), enhancing at the same time, trust. One sees this emerging, for example in the area of external audit and corporate governance (Appelbaum et al., 2017).

2.3. Networked accountability spaces (platforms)

This is the realm of the sovereignty of trust regimes. Sovereignty here is meant to invoke notions of independence. Where once trust was embedded within the structures, institutions and among the individuals to who it related, trust now has achieved a level of autonomy. It is tied to quantifiable measures derived from data all of which can be combined and recombine with other data sets to produce distinct measures of different combinations of actors. One trusts the integrity of compliance mechanisms to produce the measures necessary to make assessments of trustworthiness of specific targets. One trusts systems of accountability; one acts on the basis of the application of those systems to adjudge objects worthy of trust. Trustworthiness, then, changes personality from a judgment of character to an assessment of risk profiles (judged against liability structures) that are (closing the circle) the basis for the operation of compliance systems.

That detachment invites potentially transformative changes in the character of corporate governance and its practices. It has been suggested, for example, that “It can be observed at the global level that the technological advancement and fierce competition force the companies (e.g., Amazon, Airbnb, Google, etc.) to introduce new organization models that differ from the standard hierarchical organizational structure, called platforms” (Jadek, 2019). And, indeed, corporate governance is not immune from the trajectory that is now experiencing a change in the fundamentals of corporate governance cultures: “But platform companies do more than merely utilize new technologies to facilitate economic or social interactions between interested third parties. These companies also organize their internal operations in a flatter and more inclusive way to enable collaboration among multiple stakeholders. By doing so, they maximize opportunities to deliver constant innovation in platform services and functionality.” (Fenwick et al., 2019).

The key here is the alignment between the trajectories of digitalized corporate governance accountability with those of corporate organization. In the former case, one moves to quantifiable mechanisms grounded in visibility (utilization) and transparency (availability). Both, together necessarily create a platform-like space—that is a space where data and digitalization facilitates interactions between producers and consumers of governance, and in the process generate value for the company and enhance trust by the accountability built into the structures of the space. In the latter case, “the ‘platform’ creates value by facilitating exchanges between different but interdependent groups ... These platforms leverage networked technologies to promote economic exchange, transfer information or connect people. These companies facilitate interactions between creators and extractors of value and then generate profit.” (Fenwick et al., 2019). In both cases, the platform is a consciously directed device—like a market.

“These structures are certainly not neutral: they are designed to invite and shape participation, toward particular ends. This includes what kind of participation they invite and encourage; what gets displayed first or most prominently; how the platforms design navigation from content to user to exchange; the pressures exerted by pricing and revenue models; and how they organize information through algorithmic sorting, privileging some content over others, in opaque ways.” (Gillespie, 2017)

Code can also construct the space for accountability and corporate governance; it is the essential element for the sort of automated management that is a likely to become common (Kitchin & Dodge, 2011, pp. 81–110). At the same time, as a dialectic process, the “codification” and automation of management in the context of trustworthiness may also affect the character and content, the coded expectations for the constitution of trust and its practices (cf., *ibid.*, 11–134).

Platforms consume the product of digitalization—data (recall the difference between data and information, the later including a subjective component). Digitalization also changes the logic of this system of protecting the ideal by changing the language for its construction—from principles and description (administered by state officials) to data driven governance (understood as transforming information into

quantifiable form—its datafication [Mayer-Schönberger & Cukier, 2013, chapter 5]) that applies to create systems of rewards and punishments. But again, the data that is at the heart of corporate governance and its assessment can escape its producers in two ways that contribute to the functioning of information-governance platforms. The first is inherent in digitization—the effects of transparency and visibility—the data has to be made available somewhere to some group of consumers and producers. The second is inherent in the process of accountability integrity—the delegation of accountability to autonomous internal or external entities. These then effectively function as platforms for the collectives of consumers and producers who have access. These can be both open (transparency) or selective (visibility for corporate governance) (De Falco et al., 2017).

Note here that there is no magic to platforms; nor are they merely euphemism for social media or hosting platforms. Platforms represent a variant of a digitalized form of market. They can serve as gap fillers in the absence of traditional institutional infrastructures for example in developing states (Gatignon & Capron, 2020 [open institutional infrastructure as platform]). To that extent they embody old cultural patterns of consent, exchange and value making (da Silva et al., 2015). Elinor Ostrom's social-ecological system (SES) within which individuals cope with common pool resource dilemmas (e.g., trust in the case considered here) can also be understood as a platform—the common space within which users—consumers and producers of elements necessary for the development of objects critical to the transactions for which users have interacted—may meet (Ostrom, 2010, pp. 662–663). The development of innovation platforms for agricultural development (Dror et al., 2016) and online social recommender systems (McNally, O'Mahony and Smyth 2014, pp. 223–228) also nicely illustrate the point and in the process suggest that the separation between production and consumption blur even as detachment produces functionally differentiated roles of production and consumption (Ordaining, Miceli & Pizzetti, 2011, pp. 461–462, [crowd funding example]).

At the same time digitalization changes their character in the sense that the currency of exchange and production is almost entirely abstract, focused on data about events, actions, and the like (Backer, 2018). These are produced by firms but consumed by internal actors, external actors, public and private bodies for the purpose of internal and external regulation (through compliance or for the purpose of managing flows of data). Thus, data rich compliance mechanisms may be maintained on internal platforms which intersect with data platforms for visibility and transparency functions, each with a different (though overlapping set of consumers and producers) (Miglani et al., 2015). This dovetails nicely with the emergence of ideologies of sharing economy organizations (and the platform as its vehicle of interaction) (Zhang et al., 2020).

The key insight though is fairly straightforward: platforms are the manifestation of the interaction of the trends discussed above. The move from digitization to digitalization as a means of facilitating a transformation of corporate governance cultures from a focus on trust based on character and the presumption (qualitatively) of trustworthiness, to a culture of accountability based on data driven measures against an ideal produced a set of important and interrelated consequences. Among them were the movement toward compliance cultures as central to corporate governance; an emphasis on risk and risk mitigation; a search for measurable normative standards; and an alignment between accountability and trustworthiness. The resulting constitution of consumers and producers of data and analytics, of the production and consumption of accountability measures created a constellation of communities for which aligned, as well, with digitalization's imperatives of visibility and transparency. The tendency from all of this was detachment—of information, data, and analytics, of accountability and compliance—from an intimate and hierarchically arranged internal entity universe to a more porous and sharing environment. That changes corporate governance from an internal to a collaborative function, and from a firm specific to an ecological multi-collective effort for which platforms serve as a natural environment. Detachment now makes possible interactive physical as well as conceptual spaces, which in the case of corporate governance makes possible the separation of the corporate entity into two bodies one which manages and the other that monitors and assess (Amatucci, 2015; “Elle requiert, en d’autres termes, l’existence d’un organe qui agit, qui opère les choix de gestion et d’un autre qui surveille, en autorisant et en approuvant les choix opérés.” [trans: “It requires, in other words, the existence of a body which acts, which makes management choices and another which monitors, authorizing and approving the choices made.” Ibid., p. 101]).

3. Reconstituting manifestations of trust—data driven trust structures in polycentric space and the sovereignty of trust producing spheres

To this point one has considered approaches to questions of “how” in understanding the trajectories that has transformed the culture and practice of corporate governance. These have been bound up with and aligned in two principal ways. The first is with concepts of trust and the utility of its key end product, trustworthiness. The second is in the use of the end product in the protection of the integrity and legitimacy of collectives at the core of social and economic systems. The arc of those trajectories have brought one from the notion of governance (and trust) strongly identified with its autonomous object (the entity, the individual, the action, and the like) and its qualitative character, to the autonomy of the mechanics of a data driven conception of trust as the subjectively judged aggregation of indicative actions detached from its objects. Detachment, then, produces subjectivity and multiplicity (Marcuse 1982, 153–155). That subjectivity and multiplicity pervades but is not the same as the detached spaces, platforms, within which the production of trust through digitalized trust mechanics, may be undertaken.

Within this fractured polycentric universe of regulatory authority (Backer, 2012a) and trust production, issues of accountability and legitimacy are negotiated among consumers and producers of governance and their communities (Black, 2008). This emerges quite clearly at the frontiers of governance—business and human rights and sustainability including climate change (Bäckstrand et al., 2018). But it remains to consider the regulatory consequences of these subjectivities which now differentiate the character of trust (for one now centers the character of trust and with it of governance) within those platforms in which its producers and consumers interact and sometimes cooperate (Larner & Walldius, 2019, pp. 18–20; McNally, O’Mahony and Smyth, 2014, 220–221). These then touch on the fundamental “why” questions. Those questions, in turn, focus on more specific questions around the rationalization of anarchy (in the ecologies of multiple measuring, assessment, and regulatory systems). That rationalization at the heart of the polycentric might be considered “as the management of a loosely intertwined universe of autonomous governance frameworks operating dynamically across borders ad grounded in functional differentiation among governance communities” (Backer, 2016a, pp. 199–200), rather than as platforms, the operational spaces within which that regulation is applied. Others, though, tend to avoid its anarchic character (that is polycentricity as an ecology without an ordering center) and instead suggest that the system of polycentricity “under a common system of rules and norms that limit negative externalities and free-riding” (Aligica et al., 2019; 191).

This section, then, considers normative fracture and its consequences for the fracturing of trust and trust standards which are mediated within trust platforms. The first part attempts to disentangle digitalized corporate governance in polycentric space. It focuses on its constitution and its consequences. The primary consequence of multiplicity of methods, communities and standards is to augment the detachment of governance from a singular identity with its object and to attach it anew to the structures within which all these elements can come together. It constitutes a variant of the now better understood “multiple accountabilities disorder” (Koppell, 2005). The second part then briefly considers the character of that detachment and the emergence of what might be termed the trust platform. Causationalists might read in this a cause and effect—platforms as the progeny of detachment; though that opens the door to the distractions of the challenges of inverted, false, and imaginary causation (Nietzsche, 1888, pp. 492–499). Dialectical reproduction might suggest iterative mimetic dialectical alignment with or without linearity or conscious causative “intent” or “direction.” The virtual platform itself is both an object (in terms of its spatial quality) and events (in terms of the interactions of producers and consumers of data objects brought to that space). It might also be understood as the analytic mechanism through which producers and consumers within these object-spaces transact engagement to build common modes of interaction within shared premises (OECD, 2019 [“An online platform is a digital service that facilitates interactions between two or more distinct but interdependent sets of users (whether firms or individuals) who interact through the service via the Internet”] Ibid.).

3.1. Digitalized corporate governance in polycentric space

The discussion of trust within and as corporate governance has seen a multi-generational legal cultural transformation from a qualitative function of character aligned with a presumption of trustworthiness to a quantitative

mechanism for the assessment of trust (and of the governance derived therefrom) in which the character of trust was detached from its identity with the object onto which a judgment of trustworthiness was to be projected. As important, this movement also saw fractured two aspects of the project of trust in governance with great effects on the structure of governance. The first was centered on the fracture of communities for which the calculus of trust was necessary, both within and outside the enterprise. Related to that was a parallel fracture in the mechanics of assessment and the cultivation of the data necessary for that assessment. The second was centered on the standards to be used in making those assessments that might be considered trust related. Together they reflect what has been referred to as the challenges of fragmentation and fit (Gallemore, 2017; 640). The former touches on issues of functional differentiation among collectives who consume, provide, and regulate, whose different objectives, jurisdiction, functions require different measurement analytics to suit their needs (Aligica et al., 2019). The later speaks to the limits of function and the extent of authority among the different classes of users, including regulatory users (Ibid; citing Biermann & Pattberg, 2009; and Young, 2013).

The pathway from digitalization to polycentricity becomes clear in the context of corporate governance and its objectification-conceptualization-valuation of trust. Digitalization expresses the cultural move from the alignment of character and trust in governance. Its value system re-makes the construction of meaning of, and with it those activities that contribute to positive and negative assessments of worthiness for, trust. But it is at this point that fracture becomes the dispositive characteristic of the emerging mechanisms through which governance related trust is made. Fracture itself, though, is also fractured. First there is fracture among the users of trust. These users now include consumers and producers of trust, along with its gatekeepers (those who have authority for the measurement and assessment of trust). Each of them produce and consume trust through the production and utilization of those bits of data that now serve as trust's measure. But each consumes or contributes to their own ends. Among these are internal actors, starting with the board of trustees, charged with the protection of the integrity of the enterprise and its utility for the maximization of its value to its shareholders and other stakeholders. Among the external actors are those closest to the corporate enterprise—creditors, regulators, competitors, suppliers, customers, community members affected by corporate activity, and the like (Backer, 2007). Each of these consumers or producers understand and utilize trust in very different ways and respect to the risk managing value aligned with the context of the relationship with the object of trustworthiness assessment (Aluchna & Kuszewski, 2020).

Second there is fracturing of the mechanisms of assessment itself. These were subsumed within the generic umbrella referenced in this essay as compliance. Most of these are well known. The traditional complex of compliance mechanisms are grounded in law. They include disclosure mandates, reporting, including financial reporting, and review and assessments by regulators for certain industries (e.g., Ford, 2008). They also include the mechanisms for assessment of internal standards of governance that are derived from state common law and statute, as well as the rules administratively developed to guide the exercise of regulatory discretion discussed earlier in this essay. Many of these touch on internal controls (with contemporary statutory origins in the Sarbanes Oxley Act in the United States) and internal assessment systems. These may be implemented by both gatekeepers and internal corporate staff (Coffee, 2008).

Of increasing importance are compliance regulations touching on specific forms of conduct that relate to trust and corporate values integrity. One of these focuses on modern slavery and human trafficking (Landman, 2020; Wen, 2016). Another creates mandatory compliance obligations of due diligence in the management of supply chains (Chambers & Vastardist, 2021; Partzch & Vlaskamp, 2016). They also include two forms of non-mandatory mechanisms that have been embraced by consumers and producers of trust. The first cluster around due diligence expectations (Partitit & Van der Velde, 2017). These are especially prominent in trustworthiness relating to the human rights responsibilities of business and framed by the human rights due diligence principles in the UNGP (2011) (Smit, Bright, et al., 2020). Some of these converge, for example, in the rise of human rights torts based on failures of due diligence or of private internal regulatory structures across supply chains (Conway, 2015). The second cluster around the growing markets for standards developed and implemented by third party providers. Most of these can be manifested in corporate codes. These have become a significant source of ideals and principles against which performance can be measured and responsibility framed (Beckers, 2014; Spiesshofer, 2018). Nonetheless, each of these manifest organizational values that center the particular interests of those seeking its measure (Fotaki et al., 2020). Each of these mechanisms requires distinct through overlapping

sets of data; and that data need not necessarily originate with or be maintained by the enterprise (or its officials) who are its object. These efforts reinforce the core characteristic of digitalized systems—they are normatively empty: values and their ideologies must be supplied from outside. Nonetheless, and however polycentric, these play a critical role in the construction of trustworthiness of entities. For example, a study suggested that for a nongovernmental organization the value of positive corporate social responsibility compliance is low but negative CSR performance, when constructed as irresponsible behavior in accordance with the ways that may be assessed, can significantly affect assessments of trustworthiness among its stakeholders (Lin-Hi et al., 2014) and perhaps values based innovation (Acciarini et al., 2022).

Third, and most telling from the perspective of any hope of the preservation of the singularity of meaning of trust in business and governance, there is a fracturing of the norms by which trust is conceived, measured, and assessed. The sources of these norm producers are well known. They include third party ratings and assessment systems organizations, internal and external auditors, public and private international organizations, states, and non-governmental organizations. Each of these sources may be different not just because their values and core principles may differ, but also because their operations and approaches to digitalization will vary. At the most significant level of ideological rifts, the expression of the difference between trust and accountability systems becomes apparent among liberal democratic organizations and those operating within Marxist-Leninist environments (Backer, 2018). These differences also manifest within foundational ideological systems from the divergence of the conceptual privileging that flows from the objectives and perspectives of the sources of standards (Baudot et al., 2021). Human rights organizations, for example, will privilege trust and accountability standards that center on the human rights dimensions of corporate governance. Sustainability and climate change standards reflect a similar privileging orientation. Those differences in conceptual privileging change the values of the data selected and utilized in analytics which become apparent when systems are compared to each other. They become difficult when the conflicting standards may not be reconcilable, or where they differ just enough to make transposability possible. In the public sphere the complications occur where states impose standards but interpret and apply them differently (Al-Shbail & Aman, 2018). A common problem occurs for example, where public international norms imposes on enterprises a standard of compliance against a set of norms the legal effects of which are not recognized, or opposed, within the home of state states where the enterprise (directly or through its supply chain partners) operates. A related problem produces blocking statutes or practices where standards are viewed as threats to higher order principles—for example, sovereignty or as a form of undermining a political order into which such standards are projected.

The challenges of these convergences of fracture suggest the trajectories, not for their resolution but for their management in ways that enhance their utility to users (consumers, producers, regulators, and the like). The fractures underline the essentially subjective character of the exercise, as well as its mutability depending on the community of users and producers involved (Lin-Hi et al., 2014, pp. 1948–1950). Those fractures, of course, are the essence of polycentricity, but here expressed in a non-linear form. One is no longer speaking to the challenges of aligning a few legal standards from within a community that may be rationalized through some sort of mediating meaning making at a high level of generality. Here one is operating in a context in which the production of trust is understood as an object, as a process, and as the expression of values where data, method, purpose, and norms are all polycentric and in which it is impossible to organize them rationally to produce predictable results ... except within platforms where the participants in this enterprise may engage on all of these polycentric plateaus simultaneously, or fracture them to suit the needs of consuming producing and regulating communities requiring access. The trust platform(s), then, assumes an autonomy critical for the useful engagement with trust, and through trust, with the expression of governance—an expression that changes complexion depending on the collectives of users, consumers, and regulators mutually desiring access. And there is more—trust here serves as well as the incarnation of risk (compliance, legal, social, moral, etc.) that sets the value of trust and guides the consequences of that valuation of trustworthiness on the actions of those consuming, regulating or performing trust.

3.2. From entity to systemic trust—the sovereignty of trust producing spheres

What has been described until this point takes us to the limits of the contemporary discussion of trust digitalization in the corporate governance. Nonetheless, the rise of platforms, and their increasing utility now point to the

further development of what had been understood as digitalized trust mechanisms. It is now possible to consider the evolution not merely of markets for trust but of the development of a trust industry, both exogenous to the business of corporate governance itself. One moves here to the detachment of corporate governance from the governance of the corporation. Trust has become a commodity that itself is effectively negotiated through digitalized markets. It is in this context that one can speak to emerging transformed conception-practice within a polycentric governance ecology that pushes governance and conceptions of trust in potentially different directions (Backer, 2016b). At the same time, trust platforms, as autonomous points of engagement also embed more ancient patterns of ritual communication that deepen their symbolic value and authenticate their mechanisms. In the ritual communications that are offered up through platforms—in this case in the digitalized rituals of trust accountability (Wang, 2019).

The shift from trust in persons or institutions to trust in assessment has been facilitated by accountability technologies and digitalization. Bodo (2021) recently introduced the concept of “technology mediated trust” as another way to approach these behaviors, focusing on “how digital technologies establish new logics of trust production and change pre-existing ones” (ibid., p. 2674). Its disaggregation suggests its iterative subsystems as especially acute in corporate governance trust. Digitalization, in a sense, contributes to the production of something resembling an inversion of the traditional relationship between the trust and its objects. Trust (of an object, thing, or process) is becoming a function of trust in the mechanics by which trust is measured; trust in the process effectively serves to vouch for the trustworthiness of the thing subject to its assessment. Compliance and accountability may, in this sense, have contributed to a fracturing of both the mechanics and the standards used to gauge and measure trust. Platforms become the mechanisms by which this ecology of trust and trust producing, and trust consuming communities may be interlinked. It follows that platforms themselves become detached from and to some extent autonomous of the individuals or entities that are to be assessed for trustworthiness. The sensibilities of risk (the components for assessing acceptable risk) in corporate governance now align with the framing of trust as they are also becoming aligned in manufacturing in platforms (Jovanovic et al., 2021). And just as risk is “owned” by the risk taker, so “trust” is a commodity that is sold by its object but priced by those who must rely on it to assess the nature and character of their engagement with the “trusted” object.

Nonetheless, in the field of governance, the autonomy of digitalized trust production speaks not just to commodification and objectification—both markets of the markets-based ideologies within which social relations are possible in liberal democratic political orders. It also speaks to the need to develop spaces for producing and sharing (cf., Karunakaran 2021 [suggestion of a normalization model for trust production in platforms]). These might destabilize the traditional connection in corporate governance between the interests of share (equity) holders and other corporate stakeholders (Marchand, 2019). The structural urtext of this movement was developed, first in analogue and then in digital spaces, by the state that served as a platform organizer/manager in the context of transactions in shares (grounded in disclosure regimes meant to inculcate cultures of trust through transparency). Its effects on corporate governance were profound and now deeply normalized (e.g., Beekers et al., 2015). Now adoption of its forms may be equally influential though it may come from the legalization of disclosure and normative impositions through mechanisms linked to human rights and sustainability measures in economic production (Backer & McQuilla, 2021). However, the movement from the start of this process and its normalization is only in its earliest stages (Kastiel & Nili, 2022), promising substantial opportunities for an enriching discourse for the future.

4. Conclusion

“The financial scandals appeared in the early 2000s (Enron, WorldCom, Parmalat...) testifies to manipulations done by several managers and showed the limits of this governance mechanism.” (Manita et al., 2020, p. 3). Cultures of accountability and technology have now emerged to close what was seen as a trust gap. In the process trust itself was transformed. In its simplest form this contribution seeks to rationalize the following relations and to draw inference from their connections for understanding corporate governance. That rationalization involves an interplay among a number of contingent relationships each of which functions against and is the product of the others.

The foundational elements of trust digitalization involve its systemic foundations. (1) The premises on which trust is manifested has drifted from a qualitative character-based presumption to a presumption that trust must be evidenced before it may be deduced. (2) Evidencing trust requires quantitative measures and a structure for its production, assessment and consequences that aligns accountability and trustworthiness. (3) Datafication (quantification of assessment measures discussed above) is the necessary element and expression of compliance reduced to measurable objects. (4) Compliance is a function of the need for objective external and verifiable accountability measured against an ideal; that it compliance serves as the conceptual vessel within which trust and accountability may be produced and utilized. (5) Digitalization provides the context in which compliance and datafication can be aligned. (6) Digitalized datafication can be made most efficient by detaching data from data sources.

Nonetheless, these datafied foundations produce its own markets and institutional frameworks, creating conditions for trust autonomy. (7) Multiple consumers and producers of data and analytics create an ecology of accountability that can no longer be efficiently maintained by single actor/producer-consumers. (8) That ecology is driven in part through markets for assessment standards and the proliferation of sometimes functionally differentiated markets for trust; through platforms trust as a commodity that can be packaged and repacked for consumption in markets for trust the consumers of which are as varied as the standards used to produce it. (9) Platforms serve as a potentially powerful iterative end point of this trajectory; from which the process of iterative dialectics will continue. (10) Platforms permit a rational detachment of the process of trust from the enterprises for which trust is generated; platforms provide a space within which the ecologies of trust may operate by detaching data from its generators, and assessment from the control by those who seek trust. (11) (12) These trust platforms then permit the application of multiple regulatory or standards systems against which governance behaviors and accountability measures can be evaluated. (13) Trust platforms serve to rationalize the space where polycentric standards and regulatory mechanisms can interact with the multiple communities that produce and consume the platform content. (14) The resulting ecologies of corporate governance then produce interlinking (Pattberg et al., 2018) of communities of users and consumers (boards, officers, stakeholders, public and private regulators) that in the aggregate transform trust into a product of these processes that then itself can be assessed by its ability to manage risk.

Trust in enterprises, then, become a function of trust in trust accountability systems. Trust in accountability systems is a function of trust in the normative basis for measurement and assessment, Competition among such trust accountability systems and the norms from which trust is measured produces polycentric regimes of transnational corporate accountability, and of measuring trustworthiness, that simultaneously enhances (through systems of exogenous objectification) and undermines (through incompatible standards and methods of trustworthiness) enterprise trust. What had started as an enterprise of character closely aligning individuals to their positions, and their positions to the responsibilities it was assumed good character would ensure, became the enterprise of measuring performance and of holding performers to account. What had been a moral presumption became a quantifiable aggregate of judgment grounded in measurement and assessed against values (and thus assessed also valued). That quantification was nudged by law, to be sure. But it was made possible by technology. But technology has transformed this once intimate connection between trust and its object. The digitalization of corporate governance has permitted the disaggregation of data, analytics, assessment, and the normative systems from which judgment (and trust) is derived. These now come together not in the enterprise but within platforms. Platforms are the spaces within which trust now resides, disaggregated to be sure, but capable of producing the objects (trust) for consumption.

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Data availability statement

Data sharing not applicable to this article as no datasets were generated or analysed during the current study.

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