
The unifying function of leadership: shaping identity, ethics and the local rules of interaction

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Abstract: This article develops systems theory that relates the functions of leadership to shared identity and ethics. Using complex system leadership theory wherein leadership is defined as changing the rules governing local interactions, the theory links shared identity and ethics to those local rules. Collective identity is defined as a mechanism to actualise a shared set of local rules, and an ethical system is defined to be one which enables individuals to experience autonomy in the context of those rules while exhibiting transparency with regards the benefits and risks of participation. Because leadership impacts collective identity and thus the rules of interaction, and sometimes does so opaquely, creating and maintaining such a system is an ethical challenge for leadership. Unifying leadership is defined as the organisation level function that unites the system by shaping identity while defining and enforcing the ethical framework wherein individuals make informed autonomous choices.

Keywords: business ethics; leadership; complexity; complex adaptive systems; identity; generative leadership; complexity leadership; complex systems leadership theory; autonomy; human interaction dynamics.

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1 Introduction

In recent years a series of unprecedented catastrophic organisational failures have unfolded: There were ethical failures like those at Enron. There were operational errors exacerbated by regulatory lapses as happened during the BP oil spill in the Gulf of Mexico in 2010, and there was the Global Banking Crisis in 2008. What is most troubling is that for many of these cases it appears that many people never really understood the complexities of the systems in which they were working. They were essentially blind to the inherent weaknesses in the system and were impotent with regards addressing the mounting problems.

This paper presents a complex systems theoretical argument that links system failure to changing collective identities as well as the ethical norms at work within an organisation. It argues that because what the collective assumes are identities influences each individual's choices and actions, often implicitly, the mechanisms which create shared identities and enforce ethics must be understood if system failures are to be prevented through the actions of leadership. The article contributes a complexity and leadership framework to the discussion and at the same time builds upon the early work of Dewey (1922) about the importance of habits and custom to morality, on Giddens (1984) structuration theory including the more recent contributions by Stones (2005), and the notion of routines and organisational capabilities from evolutionary economics (Nelson and Winter, 1982), in particular the idea of dynamic organisational capabilities (Helfat et al., 2007).

These ideas are developed within a complex systems context through the construct of unifying leadership. The paper posits that unifying actions of leadership, as enacted through interactions among individuals, contribute to the formation and reinforcement of organisational identities. These in turn provide the context whereby individuals who, by adopting aspects of these identities either in whole or in part, reflect the implied ethical orientation of the collective identity in their choices, behaviours and the rules that govern their interactions. To explore this idea, the paper explicates the mechanisms whereby identity and ethics are imparted across an organisation so that certain modes of behaviour become the accepted norm while others are rejected. By making the unifying leadership mechanisms that establish shared identity and ethics more transparent, the article hopes to shed light on how deep-seated problems 21st century institutions – like those that led to the near collapse of the financial system – can be corrected through more effective unifying leadership.

As will be described, leadership mechanisms are important in forming an organisation's identity and its ethical norms (White and Lean, 2008). Uncovering the shortcomings in the way that leadership is enacted in these institutions, is almost certainly key to preventing or at least forensically diagnosing, these failings. In particular, at core, the institutional failings over the last quarter century resulted from failure of a specific leadership system function: establishing for an organisation or an institution, and thus for its members, a shared identity and a common commitment to a set of ethical practices.

The unifying leadership function is distinct from descriptions of other leadership approaches such as transformation leadership (Bass, 1985, 1990; Bass and Avolio, 1994; Kouzes and Posner, 1987), charismatic leadership (Conger, 1989), or entrepreneurial leadership (Surie and Ashley, 2007) in that the latter focus almost exclusively on individual behaviours and their influence on others as followers. In contrast, the unifying leadership function described herein focuses on the aggregate of leadership activities that

evolve, nurture and enforce shared identities and the ethical conditions that are present within the interactions among organisational participants. This commonality of interaction rules unites the organisation as a unity and at the same time differentiates it from others. While aspects of this function might be served during a charismatic or transformational leadership exchange, the unifying elements of these interactions are generally taken as supporting other actions, necessary for some instrumental objective, but not as an independent outcome, one that is necessary for system success in and of itself. In a complex system, however, the functional demand on leadership to hold the system together takes centre stage. Without it, the organisation loses its coherence and thus its benefit to those participating.

The leadership activities to which I am referring are those that define the shared identities that are offered to those who choose to participate collectively in achieving some end (Hazy and Silberstang, 2009a). At the same time, they establish, without ambiguity, the means that are, and will continue to be, an acceptable way to get there, the ethical behaviours it demands. Of course, as Dewey (1922) points out, means are nothing more than immediate ends, and proposing ends without assigning means is tantamount to relying on magic (p.37).

When identities and ethics are shared in common, they can unify an organisation through a common understanding of acceptable local rules of interaction. They provide a shared logic of interaction. This is true for the immediate present, but by offering continuity, also for the near or even the distant future. This provides a level of 'internal' system predictability for its participants even when the world outside seems dangerous and uncertain. Normalcy and predictability inside can be contrasted with uncertainty and doubt outside the community. Boundary objects (Star and Griesemer, 1989) such as dress codes, badges, or specific greetings – Holland (1975) calls these 'tags' – are adopted to allow those inside to identify those like them, those following the same rules. A boundary is formed around 'us'. Only then, are 'we' empowered to act in concert.

1.1 What are leadership functions in society systems?

Katz and Kahn (1966) famously called organisational leadership the 'influential increment' beyond the normal directives of the organisation. For these authors, organisations roll along for the most part, but forces of entropy like changing circumstances, internal frictions, inevitable design errors or changing boundaries tend to weaken an organisation's resolve absent this important 'influential increment' that holds it all together. Subsequently, using a complexity science lens (Hazy et al., 2007; Lichtenstein et al., 2006; Uhl-Bien et al., 2007), Hazy (2011) parsed this influential increment and identified three distinct functional demands that any organised system places on its leadership capability.

The unifying leadership function, the focus of this article, is one of these three distinct system level functions (Hazy, 2006, 2011). To provide the complete picture of complex organising dynamics, the three functional demands on leadership are as follows: *Convergent leadership* keeps organised activity running smoothly converging to an end point, a pattern of action that is so compelling and successful at acquiring resources that it attracts individuals toward behaviours that continue to perpetuate it; it holds the course and promotes efficiency but only with the continued encouragement of leadership that vigilantly corrects for non-constructive deviations from the pattern. *Generative leadership* creates conditions where new ideas and innovations – constructive deviations

from the patterns – are encouraged and in some cases reinforced in an ongoing effort to find new information inside the system and beyond the boundary in order to generate alternative paths forward for the system. In doing so, this type of leadership creates and keeps alive promising alternative possibilities for the future as conditions change. Finally, *unifying leadership*, the focus of this article, establishes and modifies system boundaries, sets the rules and responsibilities of individual membership and enforces them; it searches for emerging order in the system as it provides purpose for the system's members and sets the tone of interaction among them. In short, unifying leadership defines what the organisation promotes as common beliefs – the identities it assumes – and what is expected of those who participate – its ethics.

The argument to follow begins by describing the complex systems approach to leadership and identifies the unifying function as a critical element. Under this framework, additional details are offered about how unifying leadership operates to establish the system as a distinct entity. It does this by facilitating certain changes to the rules governing interactions that are necessary for maintaining a unified organisation across time and space. This leads to a discussion of the local mechanisms that nurture and grow shared identity and ethics and how these can be understood in the context of leadership.

2 Complex systems leadership theory and local rules of interaction

The framework used in this article, complex systems leadership theory (CSLT), (Hazy et al., 2007; Goldstein et al., 2010), argues that leadership can be explored as a collection of mechanisms that change the local rules of interaction among individuals to serve distinct system functions. Defining leadership in this way is an important step as a general matter, but this description of leadership is particularly germane with regards the rules associated with notions of shared identity and ethical interaction norms. This suggests a link between descriptions of ethics as rules and obligations that are common in discussions of business ethics (Knights and O'Leary, 2005, 2006) and the ethics of identity (Appiah, 2005) that enables autonomous individuals to make choices that are imbued with a reflective sense of ethical judgement. The approach used here follows Appiah's (2005) characterisation of ethics and identity.

Significantly, the approach also demonstrates why it is sometimes reasonable for otherwise self-interested, autonomous individuals to accept from others and to follow script-like programmes of action (PoA) dictated by the organisation that include in some cases pre-populated ethical choices. In particular, unifying leadership is concerned with pre-programmed scripts that imply the behavioural norms that are acceptable and what the collective believes about the 'invisible' forces driving the environment. Beliefs about these forces are tantamount to models of how the world works.

Since identities are influenced by individual action (Kuhn, 2006), this latter description becomes an elaboration of the virtuous individual tradition (Knights and O'Leary, 2006), opening the door to a deeper understanding of the potency of individual leaders as they shape an organisation's ethics. After first describing the basic idea of CSLT, the article explores how this relates to local rules of interaction. This will prepare the way for a discussion of identities and ethics in the context of CSLT that will occur in the next section.

2.1 *Emergent system properties and their effective complexity*

The idea of CSLT is that organisations can be represented as complex adaptive systems (CAS) (Holland, 1975; Marion, 1999). This means that organisations are composed of semiautonomous individuals, ‘agents’, who interact with one another according to a certain set of rules that are enacted locally. When applying these ideas to human organisations, the key, of course, is in understanding how these rules are set, how reason, deliberation, emotion, and irrationality play into their implementation in a given case, and how these rules change or are changed as circumstances change. The unifying function of leadership is posited to operate at this level within the CAS of human interaction.

Setting aside for the moment the conundrum brought forward by the uniqueness of each human interaction, what complexity science has found in the natural sciences and what makes it exciting and revolutionary, is that as agents interact with one another, something quite surprising sometimes happens: persistent supra-individual patterns of choice and action, can emerge in the system. By analogy, a business firm may be executing on a business model which suddenly achieves breakeven sales and begins to turn a profit thus becoming dynamically stable and self-supporting, a qualitatively different state than was previously the case. The patterns of activity that have enabled this success continue, almost taking on a life of their own driving future behaviour. These patterns – the business model in the example – have dynamic structures and exhibit properties that can be studied – sales and profitability in the prior example. Complexity science seeks to explain the mechanisms that enable emergent patterns that represent qualitatively different states of being (Hazy et al., 2010, 2011)

In many cases, mathematical or conceptual models connecting these higher-order properties to one another can be developed. The economic relationship between supply and demand determining prices is one example of this. These models can then be effective at plausibly predicting the values of these properties, as well as others. A business plan is an example of a model that uses the relationship linking supply, demand and pricing to forecast business results. These forecasts are then used to make hiring and procurement decisions; these in turn reinforce the plan, and so on.

When an emerging pattern like this occurs at the collective level, what Gell-Mann (2002) calls the ‘coarse-grained’ level, the predictable or stable pattern or structure is said to exhibit *effective complexity* that is less than the level of complexity (or unpredictability) that would be the case if events were purely random (Gell-Mann, 2002). This is because a stable coarse-grained pattern of action enables a model to be constructed and run so as to predict a coarse-grained outcome *before it actually happens*. In contrast, for the random case, one must wait to see what happens. Models that serve this purpose can be conceptual, simple heuristics, stories about how the world works, or very detailed mathematical representations (Crutchfield and Feldman, 1997, 2003; Feldman and Crutchfield, 1998; Prokopenko et al., 2008). In many ways organisational life can be thought of as a search for just these situations, cases where one knows what is likely to happen next and thus can take action that is ‘ahead of events’.

2.2 *Emergent properties (and models of them) entrain individual choices*

To understand how predictive models can be built and shared, it is useful to build upon complexity science results from the natural sciences. For example, Haken (2006) found that emergent properties depend upon parameters that are external to the system, and

further that the emergence of structures internal to the system can be modelled mathematically using what are called *order parameters*. As these order parameters emerge, they promote feedback into the system that influences the fine-grained interactions that are occurring causing some of them to resonate with the order parameter itself, further reinforcing the pattern. By analogy, emergent macro structures or patterns can reflect order within human organising. When these can be identified and modelled by individuals, the resulting predictions from the model generate feedback into the system and alter the fine-grained activities of individuals, further reinforcing the structures.

One example is the phenomenon of structural attractors within social systems that were identified by Allen (2001). These are patterns of activity that are catalysed by physical structures in the environment, like an oil well or financial assets, and these patterns then exert influence on the system's actors, moulding, in the CAS sense, their rules of interaction to fit the pattern. This occurs by influencing their individual choices and behaviours to conform to the patterns defined by the attractor. Gell-Mann (2002) calls these local interactions 'fine-grained'.

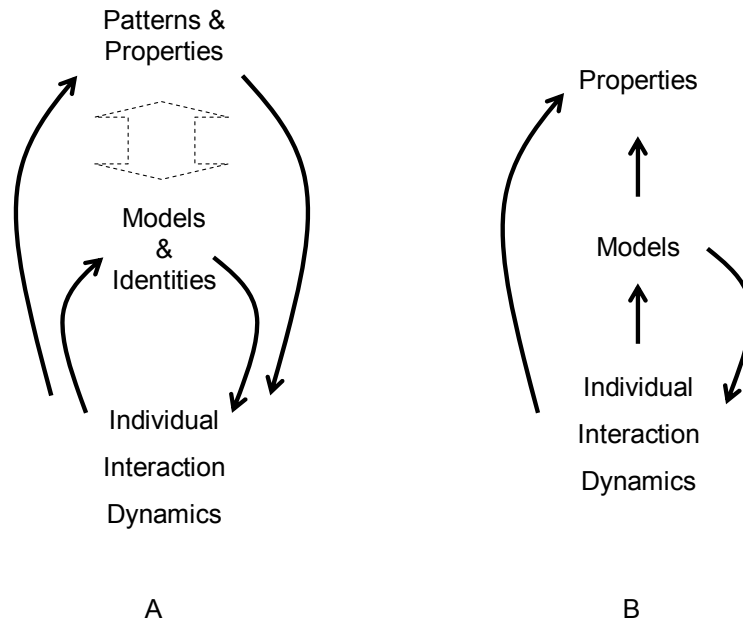
To explain how structural attractors work, Allen used the example of the decision to place a distribution centre or a warehouse at a specific location. This seemingly simple decision can impact many aspects of the organisation, including which customers are served and which employees are hired. In the example that opened this article, the fateful decision by BP executives to locate the deep water horizon oil well were they did began the formation of a structural attractor that drove many related choices and behaviours with disastrous consequences. Structural attractors are patterns that are reinforced around prior activity. The exploitation of economies of scale is one driver of such attractors.

When emergent coarse-grained patterns are observed and then modelled by individuals and groups and when these models are used to predict outcomes at higher levels of aggregation in the environment, that is, at the collective level, they influence individual choices at the fine-grained level. In so doing, they serve to entrain participants to perpetuate the patterns through their models. In the case of the Gulf oil spill, the developing attractor appears to have been reinforcing an unhealthy tendency within the rules of interaction to bury information that might have indicated increased risk which implied additional cost. In this sense models that take advantage of predictable stability of collective patterns are closely related to the more illusive notion of collective identities. Both provide a script-like programme of action (PoA) that allows individuals to act as if they were part of something bigger and that synchronises their actions with those of others. Hazy and Silberstang (2009a) argue that by adopting an identity, one inherits useful models about how things work. These models facilitate collective choice and action.

In complexity terms, these structures (and the models of them that are shared among individuals and used to enable actions that reinforce them) are called 'attractors' since they reinforce patterns of action – like leaving the office every day at about five or hiding uncomfortable facts from superiors as is often the case during institutional failures like those at Enron, during the Gulf oil spill, and in the financial service industry during the years leading up to the 2008 banking crisis. Attractors continually draw behaviour toward their pattern. These patterns shape the trajectory of the system itself as agents build models to make sense of them, and use those models to determine what to do. A complex interplay of upward and downward feedback ensues as is shown in Figure 1 Panel A. This complex interdependence is called synergetics by Haken (2006), and he demonstrated its importance in laser physics and other natural phenomena. However, as

Hazy (2006) points out, this same formulation can be thought of as a complex systems rendering of what Giddens (1984) called the duality of structure in human systems, wherein social structures at once guide behaviour, and are also recursively shaped by those same behaviours.

Figure 1 Depiction of the duality between human interaction dynamics (HID) and patterns of collective action with persistent, measurable properties of coincident action



Notes: Panel A indicates the complex relationships among properties, individuals and the models individuals build and use to predict outcomes and inform choices. Panel B shows some of the more direct relationships that might be studied initially by researchers.

2.3 Models and identities are differentiated by their emergent properties

One can think of attractors as persistent governors of individual choice and action. Individuals interacting with one another within these 'choice attractors' (Goldstein et al., 2010) result in emergent system properties that can be observed to express different levels of performance or fitness levels for the system within the environment.

Attractors are persistent governors of agent choice and action, emergent system properties that can be observed to express differing levels of performance or fitness of the system in the environment. These differences might have consequences. Simply being within an attractor does not imply the system is performing well along any measure of fitness only that the pattern exhibits a degree of stability. Likewise, as shown in Figure 1, Panel B, system properties that are recognised and modelled by individuals, like performance measures, for example, are mediated by the models that are currently in use by individuals. Performance according to any metric is mediated by the collective identities that unite individuals toward action in concert. Some teams perform better than others under the very same circumstances, for example. Some financial institutions did

better than others in weathering the 2008 banking crisis. This is because some teams share better models about the relevant dynamics to inform their choices and actions (Kuhn, 2006; Surie and Hazy, 2006).

To the extent evolutionary selection acts at the collective or group level (Okasha, 2006) to reward some ways of organising and to eliminate other organisational forms (Hannan and Freeman, 1989), a kind of group selection process is posited to ensue. If shared models, the sets of rules that these imply, and the dynamic attractor that emerges from their implementation together enable success for the group, then group selection of emergent properties becomes a possibility. The implication is that emergent identities and related shared models of the world that work to promote expressed fitness (because the models they imply suggest choices and behaviours that work) tend to survive (Surie and Hazy, 2006). These are replicated in other organisations through best practices, or are recombined as new teams form. In contrast, those that do not work, tend to die and are abandoned (at least in healthy organisations).

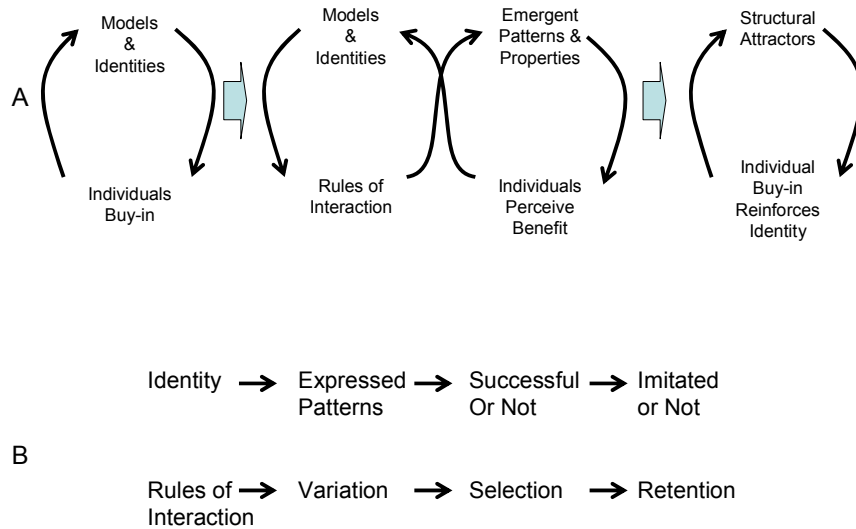
The story shown in Figure 2, Panel A goes like this: Sharing models of the world, even partially, implies that individuals share identities, experiencing and believing the same things about the world (Hazy and Silberstang, 2009b). Shared identities imply that certain rules of interaction are shared among individuals. These rules, when enacted within a collective, imply emerging properties. Once these emerge, these properties, in turn, can become structural attractors (Allen, 2001) guiding behaviour. Structural attractors are assets that accumulate resources. Their growing value implies a level of safety and survival potential for those associated with them. Towns grow-up and prosper around successful plants and distribution centres, for example.

Thus, patterns that enable the identification and maintenance of attractors can be selected under the normal mechanisms of levels-of-selection evolution theory (Okasha, 2006). As shown in Figure 2, Panel B, the dynamic attractor represents the phenotype, the expression of the interaction rules that are themselves imputed from the shared identity. The rules are thus analogous to an organism's DNA, information about how to organise. Like DNA, these rules and the routines they embody can be replicated as individuals leave the organisation and show others how to do them (Nelson and Winter, 1982). Routines are replicated when identities, ethics, and the rules that enact them are replicated. Accountants have professional ethics many of which are encoded in generally accepted accounting principles (GAAP) that others can reference and use, for example, and so on.

Each fine-grained rule underlying any given emergent property can be differentially selected based upon its particular impact on the expressed fitness of the coarse-grained property within the changing environment¹. Thus, complex systems as a class can be said to 'adapt' to changes in the environment because each surviving complex adaptive system (CAS), has in effect incorporated relevant information about the environment within its set of interaction rules and the complementary system properties and structures that emerge from them. The information is relevant because it guides choices in patterns that have worked for survival in the past (Nelson and Winter, 1982; Okasha, 2006, Nowak et al., 2010).

In the next section, the implications of these ideas to leadership research and practice are explored, particularly as they relate to the formation of collective identity and the evolution of ethical systems.

Figure 2 Depiction of the evolutionary process that selects emergent properties and their attractors and thus selects and retains variations with regards rules of interaction (see online version for colours)



Notes: Panel A shows the relationship between identities and individual participation and how each influences the other through dynamic attractors in the system. Panel B shows the relationship between collective identities and the evolution of sets of local interaction rules, the DNA-like information content that underlies the system expression within human interaction dynamics.

3 Unifying leadership and the mechanisms of identity and ethics

This section draws on the prior discussion to explore the mechanisms that establish identity and ethics in organisations and their implications for leadership. It begins by describing the position of the individual in the context of fine-grained interactions. Individual autonomy is shown to be compatible with accepting rules from others. The autonomy assumption raises some ethical issues and these are discussed. After this, the paper describes the rules of interaction themselves, how these can be synchronised to enable action-in-concert for a better collective result, and how to what individuals assume to be identities are intermingled with the collective’s identities through shared experiences of collective success while using common rules. This is followed by a discussion of the emergent coarse-grained properties that define the success of the organising project as a whole, and how models describing how these properties work, models that are both individual and shared, shape collective identity. Finally, unifying leadership is identified as an organisational capability, performed by individuals, but operating to serve a critical system function: to evolve the local rules of interaction within HID as new order emerges. It does this through the mechanisms of identity and ethics.

To begin, we describe the important notion of individual autonomy and how it is compatible with shared identity, ethical action, and collective success.

3.1 Individual autonomy while accepting rules of interaction proposed by others

Following the argument of soft autonomy put forth by (Appiah, 2005), and given the nature of social influence in the business context, individuals or agents are for the most part free to act autonomously, taking choices and initiating actions according to their individual preferences, one choice being to leave the organisation. Agents experience these choices differently, however, some being implicit while others are overtly explicit, and these differences might vary person to person. As Appiah (2005) argues, some individuals might take their choices uncritically, while others might labour over seemingly trivial decisions. Some operate from emotion, others primarily from reason. Further, choices can be either conscious or unconscious; the choice to leave the office at five on a given day, or to tow the company line, is treated as a choice, even if it is a habit that is followed without consideration.

In the idealised framework of fine-grained interaction used herein, such distinctions about how different individuals make choices are treated as noise for simplicity. (The exception is the ethical requirement that an individual must have the right to exit from his or her circumstances as described in the next paragraph.) Individuals are assumed to make autonomous choices, for example, to invent a new model of behaviour, but they can also choose to adopt or imitate the PoAs performed by others, PoAs that include a slate of pre-determined choices – like the ‘rules of the road’ or a project plan – as they seek to deal with phenomena or patterns that are occurring at the collective level. Individuals can choose to be ‘one of us’. Adopting a shared model, or the PoAs that it implies, begins the process whereby individuals adopt a shared identity. Crossing levels of analysis, individuals take advantage of the coarse-grained properties that benefit them, a profitable operation that provides continuing employment for example. They sign onto membership to simplify their experience (Hazy and Silberstang, 2009a, 2009b).

These identities are observed by agents at the fine-grained level, what we will call level ‘ n ’, who recognise coarse-grained patterns or regularities at higher levels of aggregation, $n + 1$, $(n + 1) + 1$, and so on. These place membership requirements on individuals, for example: as citizen, as community member, as city dweller, as nationalist, and so forth. Given the computational complexity of events at the individual’s level, at the fine-grained n -level in the above terms, it is surely economical for individuals, even autonomous ones, to adopt or imitate models that were developed by others (Hazy and Silberstang, 2009b). By relying on the prior work of others, individuals can take advantage of the effective complexity at higher levels of aggregation, by for example, acting as members of a community in an effort to gain the benefits that accrue through community membership.

3.2 A mechanism enabling individuals to adopt rules from others

It seems reasonable to argue that there would be evolutionary advantage afforded to individuals who could adopt rules of interaction learned from others when those rules are perceived to have succeeded in the past or will in the future. Looking to group selection mechanisms in evolutionary biology (Okasha, 2006) for support for this idea, one might expect to see evolutionary advantage accrue to individuals who can learn rules from others, particularly when they result in benefits from cooperation. Nowak et al. (2010) argued that group selection of cooperative interactions can occur without being explicitly

encoded in DNA if they play out in the context of a ‘defensible nest’. This means that by following the rules of cooperation an individual improves his or her survival potential and thus the likelihood that he or she will reproduce. Group selection of extra-genetic cooperative behaviours is thus posited to occur in the context of nesting safety and security when cooperating rules are passed between generations within a common ‘nesting environment’. Not only are genes passed between generations, but also the learned cooperative behaviours that enable a group to survive over generations when other groups fail.

By analogy, in human systems, the individual’s capacity for learning rules of interaction from others, it would seem, can evolve when this mechanism is combined with the additional condition of ‘nesting safety’. This means that survival benefits accrue to individuals and their offspring when these individuals are part of a working system that tends to survive over generations. In human systems, structural attractors, whether physical or technological (Allen, 2001), have typically accumulated physical and knowledge assets and thus can play this role. If individuals who participate have claim on the assets, the attractor serves as a resource store against hard times such that the potential for their progeny to survive increases vis-à-vis others who are outside the attractor. Thus, structural attractors offer individuals a kind of ‘nesting safety’ analogous to what is described in biological evolution. This may provide the requisite mechanism enabling cultural evolution (rules and attractors) in the context of multi-level selection (Okasha, 2006; Nowak et al., 2010). To the extent leadership shapes structural attractors, it improves or diminishes perceived nesting safety for organisation’s members.

3.3 The right to exit

One important consideration in the autonomy discussion is an individual’s right to exit his or her circumstances. If for example no other jobs exist for this person, then his or her right to exit is effectively curtailed. This is a situation of soft social coercion. The ‘company town’ is an example of an ethical conundrum in this regard since the individual, if he or she desires to remain employed, is forced to conform to company practices even if these do not conform to the individuals’ preferred ethical stance. An important ethical concern for future leadership research is thus to establish the requisite conditions that delimit the nature of an autonomous exit from organised activity as enabling element of an ethical system.

3.4 The ethical considerations of autonomy

Before moving on, it is important to note that Appiah (2005) argues that ethical success involves the individual being empowered to exercise autonomy in fine-grained interactions in order to:

- 1 successfully achieve his or her ambitions
- 2 leave a significant legacy.

If one assumes this premise, then those individuals engaged in the fine-grained activities that support the coarse-grained unifying leadership functions that shape shared identity and ethics have the reciprocal moral and ethical responsibilities to shape and provide transparency with regards the aspects of autonomy that are expected of individuals in

their fine-grained interactions. Once these conditions are clarified, the right of exit gives autonomy its potency.

For example, individuals who engage in fine-grained interactions to support the coarse-grained unifying leadership functions, by shaping the identity of an Enron employee, or those of a loan officer at a mortgage company, had the ethical responsibility to clarify the level of scrutiny and transparency that should be given to particular fine-grained transaction decisions, and the responsibility of those who are making them, to stand behind them. The current mortgage foreclosure crisis in the USA is an example of a failure of transparency in the unifying leadership of our economic, political and social institutions.

Stories abound in the press about individuals being duped by mortgage brokers to sign loans they could not pay back. Poorly educated, low income individuals are autonomous in some ways surely, but they are not autonomous in the sense that they have neither the skills nor the temperament to critically evaluate a complex legal document that could, as it turns out, destroy their financial future. Lack of transparency in the system *led them to believe* that they could trust it even though they could not understand it. In fact what was expected was for them to critically evaluate their individual choices and be prepared pay the consequences of their autonomy if their choices were wrong. At least, so it is argued after the fact.

As the above social failure illustrates, individuals in the context of their own autonomy, no matter how they define it individually, can rightly or wrongly perceive that coordinated action can improve their individual prospects, and they can opt in or out of playing-along. An ambient climate where the predictions made by the particular instantiations of models-in-use are transparent and trusted enables coordinated choices to occur with limited or equivocal information and an appreciation of risk. When a climate with this kind of 'nesting safety' is present, people are empowered to enter into explicit or implicit agreements with one or many others even under uncertainty and accrue the benefits for themselves and their progeny.

However, as the above example illustrates, they do so at their peril. They must be vigilant not only in their own choices, but also in how they evaluate the ethical environment in which they operate. This implies that individual autonomy is not always in conflict with coordinated action – in particular, it is not in conflict when choices are made within an ethical system – and that choices among individuals can in fact become inter-correlated in collective action whether for good or for ill. This observation is consistent with notions of individuality and autonomy even in the broadest sense (Appiah, 2005). For leadership, this observation raises the ethical question of transparency: how, and to what extent, are individuals to be informed about the rules, the benefits, and the risks of participating, and how are they then to be held to account with respect to the consequences of their actions? The above example illustrates the conundrum: to what extent are poorly educated consumers at fault for taking on mortgages with escalating payments? What about those who, with better information and education, developed the products or sold them to uninformed buyers knowing they could not fully understand the risks and possible consequences?

3.5 Synchronised choices and ethical rules of interaction

Next, as indicated in the prior paragraph, as an expression of their autonomy, agents sometimes elect to synchronise their choices and actions with those of others in their

circle as did the low income worker with the mortgage broker. This mortgage transaction is one event of many that together aggregate to a collective capability: delivering mortgages and thus homes to individuals for profit. This process represents the interface between fine-grained individual interactions and emergent coarse-grained properties. Throwing one's lot with the system is a recognition of effective complexity, relying on what is expected at the system-level and then anticipating that one's individual result will approximate the norm. Within an ethical system, this would seem to be an economical approach when compared to specifically watching out for one's own interests given all of the complexity that the latter approach entails.

The broad choice to accept a slate of pre-determined choices implied by a model that has been adopted from others (like 'sign here, ...and here, ...and here...') takes advantage of a model of the effective complexity of a higher level phenomenon. In the example, the coarse-grained regularity exploited was that sub-prime mortgages were pooled to manage risk and turn a profit. For the consumer and for the broker, the choice to take advantage of this difficult-to-understand coarse-grained property reduced the number of degrees of freedom that each had to navigate to close the transaction. It conserved their respective information processing capacity because signing on with the system simplified the number of choices that needed to be identified, evaluated, analysed and implemented.

This process can be efficient when the model of the system can be 'trusted' to serve one's interests. This is the case when one is immersed in an ethical system that is gathered around a structural attractor that is also transparent with regards the rules of interaction that support it. The ethical system provides transparency, and the successful history often includes accumulated resources as a hedge against tough periods. Doing one's job translates into a comfortable paycheck. Playing along, in these cases, provides nesting safety to individuals who belong. In an organisation that works, only the most impactful decisions call upon individual deliberation that consumes scarce cognitive capacity.

In rapidly changing environments, achieving this fine-grained benefit imposes a cost, of course. This cost – which is manifested as increased risk for the individual – is borne when a separate choice is taken to accept the PoA with pre-populated choices. The choice to accept a model with a prepackaged choice-matrix is taken based upon an accounting of the values of two enabling factors:

- 1 There must be a generalised atmosphere of 'nesting safety' in the system. This means that (as the mortgage holder described earlier believed) there are enough resources to succeed, and there are enough others likely to synchronise their choices and actions for a long enough period of time to create the critical mass that is necessary for the actions implied by the model and PoA to succeed. This benefit must outweigh the cost of a voluntary reduction in the number of options available to the individual. Recent research in neuroscience indicates that individuals do indeed take a bifurcated cognitive decision deciding either to cooperate with others or to engage individually in the processing intensive effort needed to logically determine the best way forward (Kuo et al., 2009).
- 2 In addition, individuals adopt the received pre-populated choice matrix of others when those others have a high reputation for success with regards the exploitation of resources in the environment at the level of effective complexity that is embodied in the model under consideration (Hazy, 2008).

The first point above relates to shared identity as an enabler of collective action. The notion of 'nesting safety' is complicated for human systems, however, because human beings have a well developed ability to deceive one another. (This also accounts for part of point 2). Some individuals might be 'sold' a false value proposition by others, where the individual would in fact be better off on his or her own. The implications of this point are beyond the scope of this paper, but the parameters of deceit within this framework could be an interesting area for research.

A climate of nesting safety carries with it an implied sense of loyalty and trust, a sense that others who share a common outlook, will look out for one another. It is within this atmosphere that fraud and corruption become possibilities. These activities effectively use the autonomy of others against them. This unethical manipulation of autonomy (Appiah, 2005) is operationalised by implying that false benefits will accrue if the individual chooses to throw in with the group. This is why transparency is an ethical imperative.

The second point above about reputation means that all influence is not equal. There are various weightings of influence among the social network connections that interconnect individuals². Orchestrating synchronisation and thus the potential for adaptation is one of the key functions performed by unifying leadership (Hazy, 2006). It does this by creating and maintaining models of collective patterns and their properties and sharing these among the relevant participants through their collective identities.

As ethics is defined in this article, using Appiah (2005), unifying leadership creates an ethical system if individual autonomy is respected, and is not manipulated through deceit. Thus, reputation also includes elements of integrity and honesty (Kouzes and Posner, 1987). These traits imply transparency with regards the rules of interaction and the nesting safety benefits associated with adopting a shared identity. Clarifying and enforcing what is expected with regards autonomy and also transparently and fairly articulating the nesting safety benefits of participation are thus two ethical imperatives of unifying leadership.

3.6 Models of emergent properties underlie shared identity

Next, we assume that agents can influence one another and the models they use with respect to both their identities and their ethics. Through the choice synchronising process described in the previous section, individual agents exert mutual influence on the identity and the ethics of one another and also exert influence on the others' perceptions of their identity and ethics. Although this is experienced by individuals as identity, the underlying instrumental benefit to the participants of holding a group identity is that patterns of collective action and their likely benefits and costs become predictable and understandable in the context of the emergent properties. Ethical systems are more predictable for those within them. It is the usefulness of the models of emergent patterns that underlies the meaning in one's identity.

3.7 Identity and rules of interaction

How does one translate a sense of identity into a series of interaction rules? Hazy and Silberstang (2009a) argued that just as individuals create models of experience to help them make sense of the environment, groups of agents in work settings interact to develop a shared model of the collective environment in an effort to understand the

resource and informational situation faced by the group; this is an example of collective identity (Gioia et al., 2000). Simple examples of this are project plans in engineering, game plans in sports, scripts or choreography in the performance arts, or a business plan or policy in business organisations. More generally, Hazy and Silberstang call these shared activity schedules, PoAs. They argue that shared PoAs are the instrumental enablers of collective identity.

PoAs are in effect extensions of Dewey's (1922) habits and Giddens (1984) social structures which guide action. They act as shared models that can be used to make sense of and act effectively within the changing environment. Hazy and Silberstang argue that a 'model', a plan, or a 'PoA' can be used by a community, a group, or a firm to respond to environmental conditions. The heuristic, 'we will tighten our belts', for example, provides an economical way, a script that each individual can use in its effort to synthesise and synchronise its individual PoA to the larger programme including its ethical elements. For a business context, Hazy and Silberstang (2009b) go so far as to equate the individual's PoA with an aspect of that person's identity since it implies a unity of purpose and gives meaning to the self. Working 'the IBM way', for example, not only describes an entire set of policies and practices that people follow, it also represents a culture and an identity; it defines a rationale for living while at work.

According to Appiah (2005, p.170): "Ideals of rationality, as they are usually understood, involve both, so to speak, calculation and information – both instrumental and cognitive dimensions". As such, there are two ways to consider the functioning of PoAs in complex organisations: The cognitive is engaged when individuals seek to understand and reflect on the patterns that are unfolding, and the instrumental is engaged when it comes time to act. The cognitive gathers and uses information to formulate plans and contingencies while the instrumental marshals the physical use of resources and the organising of people. One can consider the implications of identity and ethics from either perspective, from that of the observer seeking to make sense (Weick, 1995) and to judge the ethics of the system, or from that of the participant who is seeking to act ethically within the system.

Firstly, in the context of sense making, shared models serve an instrumental function, creating a common language, a shared social script to facilitate communication and to reduce interaction friction. Rituals, norms, and 'tags' such as dress and grooming serve to facilitate intra-community commerce, of both goods and ideas. The cognitive function serves the community by enabling recognition and shared response to emergent patterns, as well as the design and launch of new products and services.

Secondly, these models also present an action framework that defines the rules of interaction at work in the system with respect to how to respond to phenomena that present at a higher level of aggregation. Thus, they help describe the situation in ways that promote the right choices and encourage sympathetic choices from others. In this way, models and identities present ready-made premises and predicates for logical argument and serve to enable reflective discourse which can lead to thoughtful and effective coordinated responses to the phenomena. Models can be equivocal and thus can be incrementally improved and changed as individuals discover new approaches and suggest changes to the collective models through shared learning.

Importantly, a well developed memory in each of the agents, together with a means to measure and share measurements across space and time (for example, through mathematics and the sciences), enables more and more complex models and the PoAs that they imply. This might include models that assume a probabilistic assessment of

choice and action. In these cases, individuals are effectively “taking their chance with the group” because if the group survives, they will also likely survive. They stay if this probability is higher than the probability of surviving when going it alone. Once the choice to join in is made, individuals work separately to position themselves to survive and gather rewards within the group.

3.8 Unifying leadership synthesises collective identity and ethics

How does fine-grained individual leadership activity enter the picture? Individual support of the leadership function involves recognising patterns and properties, building the models or PoA (Hazy and Silberstang, 2009a, 2009b) that support an effective collective identity, and then articulating, evolving, and implementing the model’s implied rules into an ethical system. This includes recruiting effective and ethical others to participate in PoAs that are implied by the models.

One would posit, therefore, that in addition to building and maintaining shared identities, fine-grained individual activities intended to support the coarse-grained unifying leadership function would find, recruit, inculcate and retain the organisation’s members; determine the rights and responsibilities of various categories of membership; and enforce rules, rights, and values by making and reinforcing boundaries, and identifying the ‘others’ in the environment.

This system-level mechanism is called unifying leadership because it manages membership and boundaries internal and external to the system. It defines and maintains unity within the system (Maturana and Varela, 1998) through identity and ethics in the face of tension between convergent and generative leadership activities within the organisation, and it makes sense of these tensions for the organisation’s members (Weick, 1995) to find meaning. It is the ‘influential increment’ that creates and dissolves boundaries, determines the boundary’s permeability to information (Hazy et al., 2004), and establishes and enforces the rights and responsibilities of system membership.

4 Concluding comments

This article describes a new kind of leadership called Unifying Leadership that unites people in a common effort by focusing on evolving identities and on nurturing an ethical system. According to Hazy (2006, 2011) unifying leadership is one of the three critical organisational functions that leadership must perform for a complex system of human interaction dynamics to become adaptive as a system. The others are: convergent leadership which moves the system toward the exploitation of stable routines and capabilities (Nelson and Winter, 1982) to acquire resources and promote survival in the short term, and generative leadership which creates the enabling conditions wherein variety and innovation can be allowed to emerge over the medium and long term, and thus enables the system to adapt to changing conditions (Hazy, 2011). In this context, unifying leadership operates to create unity in the system across time and space even as the tensions between the convergent and generative capacities of the complex system threaten to tear the system apart. A failure of unifying leadership leads to dissolution, fragmentation or destruction of the system as an entity.

Recent advances in complexity science offer a language and elements of theory to connect agent decisions and activities to the systemic mechanisms of identity and ethics

that constitute unifying leadership. Organisations are considered to be CAS of agents connected in networks that accumulate human capital, social capital, economic wealth, and other resources. An organisation's continued effectiveness in the face of change and uncertainty is dependent upon the 'influential increment', (Katz and Kahn, 1966) of unifying leadership to achieve its purpose.

Unifying leadership is categorically different from other descriptions of ethical leadership found in the literature (Ciulla, 2004; Doh and Stumpf, 2005; Greenleaf, 1977; Painter-Morland, 2008; Pless, 2007; McCann and Holt, 2009). This is because leadership is defined not by what an individual does or says, or even what happens between leader and follower, but rather leadership is defined as a system function that can be fulfilled by one individual or many, and that can be performed by different people at different times. In particular, this paper describes how unifying leadership promotes shared identities and a common ethic to synchronise choices and behaviours across the system (Hazy, 2006, 2008). Unifying leadership enables individuals to act in concert with minimal friction because their choices are relatively unimpeded by uncertainty in the choices and actions of others.

At the same time, the ethical imperatives of individual autonomy and transparency with regards the rules in effect and the benefits and costs that accrue to participants imply that each agent's actions are predictable to his or her colleagues as they execute their plans. This transparency helps create a self-reinforcing feedback loop that enables collective action as well as adaptation and change. Unifying leadership maintains unity in these dynamics by adapting prevailing identities and ethical postures, and thus the rules of interaction, to changing circumstances. Admittedly, effective unifying leadership can further a nefarious purpose or even a criminal enterprise as easily as an ethical one. The difference is that the transparency and consistency that result from unifying leadership imply that individuals know the nature of the collective purpose that is guiding their choices and actions and can fairly estimate the benefits and costs that are likely to accrue to them. By virtue of each person's individual autonomy and the transparency of information afforded by ethical unifying leadership, each person is empowered to choose to participate or not according to his or her own ethical compass.

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Notes

- 1 There is a nuance here: in evolutionary biology, fitness is expressed not by the performance level of an individual with the trait, but by the reproductive success experienced by the carriers of trait in the population (Okasha, 2006). Thus, in this case, rules are selected because they are easy to imitate or transplant as well as for being a net benefit for survival, but the latter is relevant only to the extent survival enables replication.
- 2 This additional complexity would seem to imply that synchronisation is more likely to occur around the preferred choices of those with higher reputation than the preferences of others, particularly if those individuals are more highly centralised in the network. However, one cannot assume that the choices of the highest reputation individuals will dominate. This could be a fertile area for additional research.