

# Towards an Autopoietic Social Systems Theory of Leadership

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**Abstract**

Despite a long history of theoretical and operational study, there remains considerable debate around what leadership actually *is*. In this paper, I propose through a series of steps that leadership may be considered as an autopoietic social system (after the work of Nikolas Luhmann (Luhmann 2013)) that alternates its existence with the organisation system, with the transition between them taking place at junctures triggered by the grand uncertainty presented in the form of the ‘wicked problem’. This theoretical approach to the nature of leadership is demonstrated to accommodate existing theoretical approaches to leadership from across the range of schools of thought on the topic, and to create a framework for perceiving leadership as a transient state independent of individual leaders.

## **Introduction**

Leadership remains a contentious subject. Grint (2005 p 17) described it as an essentially contested concept, and field reviews in the *Leadership Quarterly* (Dinh *et al* 2014; Gardner *et al* 2010) demonstrate that there remains a wide range of views on what leadership is, and how it operates. Glynn and Rafaelli (2010) identified that the plurality of theory and absence of a paradigmatic consensus within the field of leadership had diminished its academic standing. In short, leadership has, despite a long history of rigorous academic study, remained ontologically uncertain and epistemologically elusive.

There remain adherents to and advocates for a variety of schools of thought on leadership, running the full gamut from trait based approaches through behavioural and contextual elements to newer relational approaches such as Leader-Member Exchange (Graen and Uhl-Bien, 1995) and Distributed Leadership (Bolden, 2011). What is notable from the *Leadership Quarterly* reviews (and indeed even the most cursory of wider explorations of the topic within the literature) is that such a diverse range of interpretations of one concept still leads to the production of a body of useful research and findings on leadership as praxis. This is something of a paradox. On the one hand, we find ourselves dealing with a wide array of often competing interpretations of a single concept, leadership, and on the other we find that irrespective of the approach taken, there is often something of value to be found by it. To make sense of this, we are forced to conclude that our understanding of leadership is incomplete.

In this paper I propose a possible way forward for the understanding of leadership which hopefully offers both a resolution to this apparent paradox and a framework for further understanding leadership as a tangible and functional concept. I begin by locating leadership and arguing that it cannot exist without a social dimension; then look to define what is produced by Leadership as a relation or social interaction, particularly with regard to uncertainty. From this point I am able to introduce Luhmann's conception of the Autopoietic Social System (Luhmann 2013, Hernes and Bakken 2003) and to argue that the location, outputs and operations of leadership allow it to be seen as just such a system; further, I intend to show that *leadership* and *organisation* can be seen as complementary and alternating forms of Autopoietic Social System and that by doing so we can reconcile existing theories of leadership, organisation, and organisational change. Finally, I explore some of the implications of such an interpretation.

## **Locating leadership**

We cannot begin the journey to an understanding of what leadership is, without first locating it in a defined space within human experience. The bewildering diversity of situations presented where leadership is claimed to occur can lead one to presume it is ubiquitous. We can however start to draw definite lines around the context of leadership, starting with the premise that leadership must involve more than one person. To claim that an individual is self-led is purely to assign them autonomy and volition, whereas discussion of leadership invariably tends towards expectations of influence of one person upon another; that we have in effect seen a delegation of volition to another. In short, for leadership to exist requires the presence of both Leader and Follower roles, however they may subsequently be identified, adopted and enacted. I do not, at this stage, seek to make any judgement on these roles other than to accept that they exist; their occupancy necessarily remains open until we have made further progress.

If we accept the premise that for leadership to exist, there must be at least one leader and one follower, then we must also accept the premise that leadership is somehow rooted in the social interactions between these roles, in the same way that friendship is rooted in the relationship between two or more friends, partnership between two or more partners. It is the only conceptual space whose existence is predicated on the existence of both leader and follower. This is an important step, as the overwhelming bulk of existing theoretical approaches to leadership have come from a psychological perspective, whereas the simple logic of this conception is that leadership needs to be viewed from a sociological perspective.

We may go further, and place some form upon this relationship. A shared direction of travel is implicit in the etymology of the words 'Leader' and 'Follower', and from that there is implied a shared journey. However, rather than simply fellow travellers, leader and follower have a distinction; that the journey is somehow shaped by the leader, but adopted by the follower. Therefore we may infer that there is an accord between Leader and Follower; that the Leader has presented or implied some form of the future to which the Follower concurs.

By taking this step, we preclude coercion from any conception of leadership. In coercion the accord is absent, and the follower is acting against their will; when leadership takes place, the shared direction of travel is willed by all participants. What we have, then, is a situation where multiple individuals are sharing some common purpose that provides direction to them.

Where we have multiple individuals acting in accordance with one another, multiple persons engaged in a common purpose, typically we would describe this situation as an organisation. Leadership must then be intimately bound with notions of organisation at the conceptual level; it is impossible to conceive of leadership divorced from people acting in an organised context, even though that organisation may be so informal as to lack measureable structure. We expect leadership to occur within both small and large groups of people, so we must also accept the premise that our understanding of leadership must encompass both a micro and macro scale of relationship between people, which is to say that it must account simultaneously for both a direct relationship between two people, and a more distant, indirect relationship of a single person with a multitude.

### **Defining the outputs of leadership**

Following on from defining the context of leadership as concordance between multiple persons in an organisational relationship, and having proposed that existing theories of leadership describe inputs to leadership, we must next ask – “what is it about people in accord in an organised context that demonstrates the output of leadership?” Naturally, our inclination is to first turn to *acts*, and propose that the behaviour of these people embodies the outcome of leadership. We may look to examples of change, or even the generation of new organisations from un-co-ordinated individuals, and attribute the changing behaviours or co-ordinated acts of the people involved as an output of leadership, and it would be difficult to argue against that. However, this is not the whole story, for it is equally possible to envisage a situation where leadership results in *inaction*; people continuing exactly as they are, rendering acts as neither necessary nor sufficient conditions for leadership output. In essence, leadership can equally engender acts of omission or commission, and a ship holding a steady course can be ascribed to leadership in the same manner as one changing its' destination port. What, then, is the property of people who are able to act or not-act as a result of leadership? What is it that leadership offers them that enables them to navigate such a potential discontinuity? I propose that it is the resolution of uncertainty, as this is the only

common condition between those who chose to act, and those who chose not to act. In both cases, persons within the organisation are faced with uncertainty, and that uncertainty is resolved sufficiently that they are able to either maintain or change as appropriate.

However, we must confirm that this resolution of uncertainty is exogenous; to not do so is to accept that leadership can come from a single person in an organisation consisting of that one person, which we have already discounted. To put it another way, we must be sure that leadership removes *shared uncertainty* (or perhaps more precisely an absence of shared certainty) between *multiple* persons. As we have claimed above that leadership must exist between two or more people organised and in accord, this must have been preceded by a state whereby the individuals concerned were *not* in accord. This constricts leadership, and forces us to reconsider and reconstitute our earlier conception; moving us from leadership existing where two or more people are organised and in accord, to leadership existing where two or more individuals are organised and in accord from a prior state absent of a shared certainty.

Thus we arrive at a point where we have isolated leadership between its contextually varied inputs, and its singular output. The implications of this are that the leadership 'black box' is a system that resolves shared uncertainty between individuals by the employment of a variety of inputs, principally human capacities and behaviours, contextually modulated.

How then does the leadership system use such a wide variety of inputs, against an almost infinite variation in context, to produce such a singular outcome? To answer this, we must address two things. First we must examine the nature of uncertainty / certainty for organisations, and ascertain how it necessitates leadership over other processes. Then we may look at the mechanics of the leadership system, in terms of how it directly engages with uncertainty.

### **Uncertainty within organisations**

The notion that Uncertainty is a monolithic entity, a binary alternate to certainty, is seductive. In economic circles however the conception is more nuanced and relies on the initial work of Knight (1921, noted in Mousavi and Gigerenzer, 2014) who contrasted it as unbounded when compared to the delimited and knowable 'risk'. In terms of how uncertainty and risk present themselves in practice, Rittel and Webber's (1973) notion of Tame and Wicked problems offers an elegant conception. Tame problems present risk, a reduced uncertainty that is bounded by existing knowledge and will yield to a structured approach (even if it is necessarily complex), whereas the Wicked problem is novel, has no determined resolution and so falls outside the capacity of available tools and resources as they are currently constituted. So for an organisation, tame problems present uncertainty about the outcome, whereas wicked problems present uncertainty both regarding outcome *and* the decisions to be made in achieving an outcome.

Systems, including organisations, are subject to dynamic processes and change from their environment. However, to conflate this with perceiving organisations as being in a constant state of flux is to confuse the *potential* for dynamic change (and indeed its' need) with its' *inevitability* or indeed *desirability*. Organisations are not created to radically change; to create an organisation with the goal of changing it is to implicitly accept that the wrong organisation was created initially, and this runs counter to our experiences and knowledge of all the organisations we encounter. Businesses exist to deliver their products and services profitably, Governments to maintain the social order and integrity, Religions to celebrate and promote their beliefs and so forth. While organisations accept fluidity in their environment,

they seek to impose limitations on this through the decisions they make, and their decisions are generally made within the framework of acceptable uncertainty. Essentially, organisations exist to impose order upon the environment and to resist variation.

This is not to claim that organisations do not change, nor that they demand absolute certainty. Rather, I contend that organisations exist to limit *uncertainty* by reducing it to *risk*; that is, they operate in relation to tame problems and thus any changes they make are within the acceptable horizons of their current certainties. Over time this may lead to substantive accumulated change as evolution, however organisations (both formal and informal) form around a guiding principle; to achieve an economic, political or social goal. While there may be an acceptance of the uncertainty as to how that goal is achieved, or even its' innate achievability, there is a shared expectation that forms a boundary around 'the possible'. The organisation, therefore, contains the capacity for the solution to the tame problem, and it is in essence a collection of people with shared certainties. It is when the wicked problem presents itself that potential responses fall outside the boundaries of the organisations current capacities, and generate the conditions for a revolutionary change.

This presents us with a mechanism for the generation and purpose of the leadership system; for while the organisation system is constituted to deal with tame problems, it is not and cannot be so for wicked ones. Therefore, we can envisage individuals within an organisation dealing with tame problems because their scope is known, and while there is uncertainty about the exact choices and outcomes associated with them, this uncertainty is limited and therefore will yield to the resources available within the organisation. However, upon the appearance of the wicked problem, the uncertainty presented relates to the nature of choices and outcomes. The organisation engages with uncertainty about which alternatives are selected by decision, whereas leadership deals with uncertainty about which decisions are required.

### **The mechanics of the leadership system**

If leadership exists as a system for the resolution of uncertainty (in the form of wicked problems), then we must ask how it does so. Grint (2010) has previously suggested that leadership is required for tackling wicked problems, however he primarily argues that while leadership must be some kind of system engaging leaders, followers and other required resources, leadership itself is essentially unknowable and will remain contested; whereas I propose that the very nature of leadership is as such a system for resolving uncertainty. Holding to the notion that in relation to the wicked problem, by uncertainty we mean the uncertainty of choices *and* outcomes, then logically leadership must offer a route to a solution to the wicked problem. However, as Grint (*op cit.*) points out, the unknowability of the resolution to the wicked problem allows for a potentially infinite range of options, and therefore we cannot ascribe the solution directly to leadership. In other words, leadership is not the solution and can never be; rather leadership is the *vehicle* to a solution, in the same manner that the organisation is the vehicle to solutions for tame problems, rather than simply being the solution in and of itself. Thus we see that the two, leadership and organisation, are parallel forms of system for engaging an absence of certainty, dependent on the nature of that absence of certainty.

If leadership is a system that allows identification of, and access to, solutions to wicked problems then it must exist as a system of *communication*, for there is no other means available for removing uncertainty and presenting decisions between people. This would apply if the communication acts performed by leadership were encoded as language or

behaviours. Therefore, leadership can be conceived as a social system of communication for dealing with uncertainty (wicked problems).

### **Leadership as an Autopoietic Social System**

Nicholas Luhmann was a German sociologist who made a significant contribution to the study of social systems. Luhmann's work generally, and deliberately, resists easy analysis and restatement. However, the principle components of his theoretical construct, the Autopoietic Social System (Luhmann 2013), serve to present a distinctive and novel approach to understanding the nature and function of leadership, especially when compared to other approaches of a similar nature such as Complex Systems Leadership Theory (Hazy and Uhl-Bien, 2014; Lichtenstein and Plowman, 2009; Hazy, Goldstein and Lichtenstein, 2007) or Distributed Leadership (Bolden 2011).

Luhmann proposed that social systems are autopoietic communications systems that are operationally closed, but interactively open, and self-sustained by a series of communication/decision acts. This presents a theoretical framework for understanding leadership as a social system of communication. For Luhmann, social systems exist as communication systems, separate from the psychic systems (individual human beings) and other agents that form the substrate upon which they are built. Autopoiesis, or self-generation and self-sustenance, is performed by two inter-related actions of the system. The first is that the system consists of a chain of communication-acts each of which creates the conditions for its successor. The second is that the logic of the system's existence, (which Luhmann refers to as the 'program' of the system) depends on the persistence of the distinction between the system and its environment (its identity), and this distinction is in turn maintained by the communication chain.

For Luhmann, a social system is one that maintains an identity distinct from the wider environment and does so by both observing the distinction and challenging it in a continual series of decisions and communications. So, to take an area that Luhmann himself spent some time on, the Law is a social system; it is identified and maintains its identity through the maintenance of the distinction legal-not legal. Thus its operation is closed (anyone involved in legal matters becomes part of the Law system), but interactively open (individuals may enter and leave the system by dint of participation in its program). Most importantly the decision communications made by Law result in a distinction between itself as a system and the wider environment. Should chaos descend and the 'rule of law' give way to anarchy, the system's logic would fail and it would cease to exist as a system.

Luhmann's systems theory has been applied to organisational studies (Bakken and Hernes, 2002; Seidl and Becker 2006); naturally if one is to accept Luhmann's theory of social systems, then organisations as fundamental social systems must be accommodated within this approach. However if we do so, then we must reconcile the parallel existence of organisation and leadership as autopoietic social systems, especially as theorists applying Luhmann's approach to organisations have done so on the basis of them being systems intended to deal with uncertainty, which is territory I have already (partially) claimed for leadership.

Luhmann (1988) makes much of the paradox of decisions, as decision forms the primary defining feature of an autopoietic organisation from which its other defining features (Jönhill 2002, p25) arise: membership, program, and places and staff. For Luhmann, decisions represent a paradox in that they must represent both the reality of choices (as part of their 'before' state) and the inadmissibility of alternatives from the decision taken (the 'after'

state). Luhmann settles on a definition of decision as the “operationalisation of systemic complexity determination” (Luhmann, *op cit*). That is to say, for Luhmann, decisions within the organisational context are made within boundaries set by prior decisions, and each decision made further creates the context and option limitations for future decisions. Thus the very nature of the organisation as a chain of decisions limits uncertainty and allows it to be seen as described above as a system for dealing with tame problems; in particular, the decisions made regarding membership, program and staff/place are entangled in such a way that they define certainty for the organisation;

- Membership decisions are made on the principle of some kind of ideology, whether it be the formal ‘person specifications’ and recruitment processes of a formal organisation or the identification of a movement.
- Membership decisions therefore define staff/place
- The ideology itself arises from the decision-acts of the members
- The ideology in turn defines the program and hence the identity of the organisation system

However, this presupposes that the decisions to be made can be made within such a framework. This is where I believe Luhmanns’ premise that organisations are founded to deal with uncertainty meets its limitations, and that this uncertainty must be of the ‘tame’ type as opposed to the ‘wicked’. There are two key indicators that this is true.

First, there is Luhmanns approach to decisions as set out above. Because the decisions are made in a framework built from predecessor decisions, the situation is not truly uncertain but deterministic; an individual acting as part of an organisation system makes decisions that are bounded by previous decisions (for example, a manager in a business makes decisions within their remit as decided previously by the chain of decisions that created their role and appointed them to it). Further to this, the decisions made are from a range of defined choices, and with knowable possible futures, and are therefore tackling tame rather than wicked issues.

Secondly, there is the generative impulse that creates organisations initially. As described above, irrespective of the form, from multi-national corporation, to community movement, individuals coalesce into an organisation around a shared set of values. This can be articulated as a slick vision and mission statement, formulated as a sophisticated articles of association, or simply held as a common understanding, but at its core there is a collection of principles that are held as certainties. The subsequent structures and life of the organisation are aligned to securing those certainties, and indeed to maintain its program and identity the system itself filters what enters into the system. Thus the organisation system is structured to deal with risk and tame problems.

Logically, then, if an organisation is created from a desire to achieve certainty, and it’s rules are created to maintain that certainty, then the role of the wicked problem and its related uncertainty in the life of the organisation is as unwelcome visitor, and the natural response of the organisation to such uncertainty is paralysis. The existing rules, the processes and procedures, the artefacts, strategies and agents are no longer adequate. This opens the possibility that leadership can be understood as an autopoietic social system structured to deal with uncertainty and wicked problems.

It is at this juncture that we see the emergence of leadership as a necessary alternative system to organisation. Organisation has reached an existential crisis; it cannot continue as before because the logic of its program has ceased; its structures and functions are no longer capable of sustaining the chain of decision-communication-acts and the identity boundary of the organisation collapses as the organisation has no differential response to offer the wicked problem than the environment at large. Leadership is required to respond to the resultant uncertainty, and therefore takes the place of the organisation, initially inheriting its various assets. A new system identity is created around the program of uncertainty, and commences a chain of decision communications consequential to that. The operational closure of the leadership system is created around focus on the uncertainty, and the interactional openness allows the various assets available to be tested, and retained, discarded and replaced, or amended as necessary.

This then allows us to see a purpose for leadership; to act as a metamorphosing stage to the organisational system, in response to the uncertainty, or more prosaically, to return to organisation and to a new certainty. In this respect they strongly resemble Lewin's classic three-stage model of change (Lewin, 1947), whereby the organisation is the 'frozen' stage, while leadership is the 'unfrozen'.

### **Implications of this Theoretical Approach**

Adopting the view that leadership is an autopoietic social system, existing as an alternate form of what we know as the organisation, has a number of implications in terms of utility, predictive power and praxis.

First, it creates a systems-based model of leadership predicated on communication in response to uncertainty, and thereby provides an accommodation of existing theories of leadership as these represent a variety of interpretations of the required inputs to such a system. Leadership as a system is demanded because of the presence of wicked problems which do not fit into the machinery of decision making created by an organisation, but how exactly that resolves itself is dependent on the way in which the new leadership system interacts with its environment and draws and employs various resources available: Luhmann places the elements of the system on a transient basis, becoming elements only through their use by the system (Siedl and Becker, 2002 p16). Individual capacities (as per Trait and Behavioural theories of Leadership) matter only in so much as they can be put to use by the system, and such use is fundamentally to place them in a relationship with other elements; leadership relationships (Transformational/Transactional leadership, Leader-Member Exchange, Distributed Leadership) arise appropriately as a result. The context of the leadership system (as covered by existing Contextual and Situational approaches to leadership) are defined by the interactional openness of the system, as are the identification and incorporation of novel assets from the wider environment (as per Granovetter's (1973) 'strength of weak ties', for example). All potentially play a role in fuelling the leadership system in its autopoiesis.

Second, it is implicit that leadership is transient, and that once the uncertainty has ended, so too does the leadership system as the logic for its existence has ended, segueing into a new organisation changed from the old. Leadership emerges as a response to the organisation facing issues irresolvable within the meaning, logic and structure it currently possesses. The

organisation faces a ‘wicked problem’ where the certainties encompassed by its combined policy and procedure (in complexity theory, its ‘rules’) are no longer valid. The leadership system maintains itself only as long as its program, that it is dealing with a wicked problem, sustains. Once the system is faced with an absence of wicked problems, and only tame ones, it is no better equipped to deal with these than the wider environment and its identity boundary collapses, to be replaced by the (new) organisation system. This in turn opens the possibility of leadership not being as permanent a feature of organisational life as some would imply, and presents us with a potential reversal of the famous dictum of Warren Bennis, in that many organisations may actually be over-led and under-managed. This engenders a number of potential situations:

- Those with managerial responsibility and authority within an Organisation system perceive themselves as leaders and apply leadership inputs where there is no requirement for them, creating frustration.
- Individuals self-perceiving as leaders reinforce their positions by artificially creating wicked problems (or framing tame ones as wicked) to validate their desire to employ leadership inputs, thereby creating confusion.
- Organisation systems could misperceive wicked problems as tame ones, resist the transformation to Leadership system, and continue to apply existing assets fruitlessly in their search for a solution, creating dissolution.
- The Leadership system could declare certainty restored too early, and adopt Organisational approaches prematurely, leading to indecision.

Third, it enables scalability in application, as the uncertainty that ends the organisation and generates leadership could be organisation-wide in scope, or simply affect a sub-system of the organisation. Thus we could envisage an organisation in which large parts maintain under the continuity of certainty while a specific sub-section of it is faced with the existential crisis that generates the leadership system. This in turn opens the possibility of examining the interactions of the two systems when they exist simultaneously. I propose that we can divide these into first- and second-order categories.

First-order uncertainties challenge the core purpose of the entire organisation. For example, a political party that faces rejection at the ballot box is presented with such a first-order wicked problem. Policy decisions, made until this point within the framework of an ideological certainty, become impossible; everything is judged against a broader question of political validity. Therefore, as an organisation system the party ceases to exist, and the leadership system takes its place, inheriting the various resources from its predecessor organisation and tackling the wicked problem of what the organisation should stand for. The leadership system then proceeds, accommodating or discarding existing resources, and bringing in new ones as appropriate, as it engages with the wicked problem. The resolution of the wicked problem then signifies two events; the collapse of the leadership system logic (because the identity boundary of the leadership system cannot maintain when it is no different than the wider environment for engaging with the new certainties); and the generation of the new organisation system around the new certainties, inheriting the revised portfolio of resources developed by the leadership system.

Second-order categories present uncertainty in the *method* of maintaining the certainty of the organisation, and therefore present an existential crisis to a sub-system, but one which then naturally has broader implications across the whole system (for a system cannot have a sub-system changed without being changed as a whole). For example, a business running a chain

of shops is presented with new technology that drives retailing on line, and must adapt in order to continue with its' goal of making a profit from retailing. Potentially, given appropriate perspectives within the organisation (and here we touch on Levitts' (1960) notion of 'marketing myopia') second-order uncertainties can be allowed to become first-order ones. So the board of the business, if stuck in the perceptual trap of seeing themselves as running shops rather than serving a market, can frame on-line retailing as an existential, first-order uncertainty and respond accordingly.

Finally, it presents us with a potential predictive model of how organisations react to uncertainty and develop, which presents the possibility of interpretations of change and change leadership. In my proposed approach, the organisation is predicated on certainty, is structured to make decisions within a narrow range of uncertainties (that is, tame problems), and so undergoes evolution through the accumulated small changes represented by a chain of decision-acts that underpin its autopoiesis. Once the organisation is faced with a wicked problem, it gives way to a new social system called leadership; this is a state of revolution and step-change. If/when the new system returns to certainty and creates a new organisation, this may trace both its heritage and its decision-acts back through the leadership phase to its predecessor organisation, but is fundamentally and significantly altered from the former.

In keeping with Luhmanns' conception of the autopoietic social system, the leadership system requires neither *specific* human participation nor material elements; which is to say that it does not require Leaders as we might have traditionally envisaged them. What it consists in is a series of communication acts as decisions, predicated on the logic of continued uncertainty. Which individuals (psychic systems) or other resources are utilised by the leadership system depends entirely on context, availability and above all utility. Thus we can see that an organisation enters a period where 'leadership is required', but where a number of possible paths can be taken by the subsequently generated leadership system. We can envisage a situation where the resources (including psychic systems) available are sufficient to enable the leadership system to quickly re-establish certainty and give way to a new regenerated organisation system. This would however demand they be interpreted and employed in novel ways. Alternatively, the resources and psychic systems available are not fully sufficient and the leadership system sustains until new resources become available, existing psychic systems alter, or new psychic systems join the leadership system. In some cases, the resources and psychic systems would prove insufficient, but the capacity to identify and secure new resources is restricted, and so the existing elements gradually disperse away from the leadership system until it ceases in a final certainty of 'no future'.

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