School Principal Responses to Ethical Dilemmas

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Abstract

This paper shares findings from case study research into how school principals respond to ethical dilemmas. Preliminary research instigated a criteriological inquiry into the nature of schools as systems and findings of that inquiry conclude that schools are complex adaptive social systems rather than the open complicated systems they are unconsciously assumed to be in much of the school leadership literature and professional support. This misrepresentation and misunderstanding of the nature of schools as systems have significant consequences for the effective practice of school leadership and these are particularly poignant in responding to ethical dilemmas.

This paper offers an overview of the argument that schools are complex adaptive social systems and identification of leadership work that is compatible and incompatible with that mental model of schools as a system.

A finding from the case studies is that the principals act in ways consistent with the nature complexity, without explicit awareness of the mental schemas they are applying. Furthermore, their real life approaches are not reflected in much of the professional learning support and leadership theory currently available to them.

The paper identifies principal practices from the case studies that are compatible with the real nature of schools as systems and considers the potential of those features as a framework for critique of policy, professional support and school leadership research and literature. It also proposes that the ways principals understand and respond to real ethical dilemmas challenge the ways schools continue to be defined.

The organisational characteristics of schools as systems

School leadership research and literature rarely pay explicit attention to the nature of schools as systems. Organisational theory is not utilized as a means of understanding why things happen the way they do in schools. This paper applies aspects of system theory in interpreting the relationships between how principals understand the school environment, their ethical principles and their leadership practice.

This section provides a brief summary of how 'systems thinking' is used and applied in the study. There are some observations about its use in school leadership theory and literature.

What is systems thinking?

Systems thinking is the way in which one understands how different parts of a system or organisation interact and influence each. A system is 'any perceived structure whose elements hang together because they continually affect each other over time' (Senge, Cambron-McCabe, Lucas, Smith and Dutton, 2012). Sterman (1994), Boulding (1956), Forrester (1998), and Pispapia (2009), writing about system thinking but not schools specifically, make several relevant points. Sterman notes that this systems thinking is not common and that it more common to see parts of an organisation in isolation from each other. All of these writers that the systems thinking that does take place is most often and enduring mechanical 'clockwork' model (Boulding), and Hazy notes that systems theory has developed over the last hundred year (Hazy et al., 2007, p. 38). System thinking as an uncommon practice and a persistent view of human systems as clockwork mechanics set the scene for explaining contemporary systems thinking as demonstrated in school leadership literature.

What are the specific characteristics of open complicated systems and open complex systems?

The key finding of the organisational characteristics of schools is that schools are open complex adaptive social systems with some characteristics of open complicated systems. The inquiry identified that school leadership literature is based on characteristics of schools as complicated systems rather than complex systems and that this choice is based on unexamined assumptions and a lack of awareness about the important consequences of unexplored mental models about the nature of schools as systems. Consideration of schools as systems is uncommon in education literature and those who do examine schools as systems conclude that they are complex

The differences between mental models of human systems are grouped as either complicated, complex, or a mixture of both. While both are open, in the sense that their boundaries as human organisations cannot be clearly differentiated from other human organisations, the differences between complicated and complex are profound. The Open Systems Criteria Framework is summary of characteristics identified in the theoretical examinations of these models.

Complexity theory has been applied to research on leadership in recent decades. The Leadership Quarterly in 2006 and 2009 contributed to the thinking. The work of Lichtenstein and Plowman (2009), Marion, Christiansen, Klar, Schreiber, and Erdener (2016) and Olson and Eoyang (2001) are among those included in the literature review who have contributed to the development complexity theory and complexity leadership theory and their particular characteristics. Heifetz (1994, 2001, 2009) in particular has contributed to the concept of

adaptive leadership as a practice appropriate to complex systems as opposed to the technical work informed by expert knowledge of solutions to known problems.

What is the case for schools as open complex systems and particularly complex adaptive open social systems?

The case for schools as largely complex systems is derived largely from theory and research not explicitly based on schools and some of them are identified above. A number of education researchers do present the case for schools as complex systems. Morrison (2001, 2011) applies complexity theory specifically to schools by taking complexity characteristics, emergence and self-organisation for example, and demonstrating their relevance to schools. Duignan (2012) notes the need to 'recognize that schools are living, complex, dynamic, mostly non-linear organisations' (p. 21) and others including Gough (2012) who writes extensively about schools as complex systems and Beabout (2012), Boal and Schultz (2007), and Keshavarz (2010) who all argue for the importance of understanding schools as complex systems.

Tackling wicked problems: A public policy perspective (Commission, 2012) argues the case for schools as a public sector organisation as a complex system. The paper cites the concept of 'wicked problems' introduced by Rittel and Webber (1973) whereby social issues addressed by governments 'defy traditional ways of working and solving problems in the APS [Australian Public Service]' (p. 10). Rittel and Webber examine the 'dilemmas' emerging in planning theory that cannot account for problems resistant to formal authority, expert knowledge, and the application of known solutions, such as public health and poverty. Highly relevant to this study is their observation that these wicked problems require responses based on choices about what is ethically most important. The literature view also explores their argument that wicked problems have emerged because many problems previously viewed as easy because they could be judged by efficiency are now being 'challenged by a renewed preoccupation with the consequences of equity' (p. 156).

The Open Systems Framework identifies the generic characteristics of open complicated and open complex systems. These characteristics are used to explore principals' interview responses.

Open Systems Criteria Framework

Schools are open social systems in that information and human relationships cross between the boundaries of a school and its environment. To what extent is a school complex and/ or complicated?

Complicated System characteristics and thinking

The system can be controlled and the problems they present allow permanent solutions.

The structure of the system can be broken down into smaller and smaller parts and analysed and understood as separate parts.

There are clear boundaries and clear areas of authority internally.

Structural analysis is possible – the separate parts can be understood and put back together without loss of meaning.

The patterns of change are structured by cycles, growth is controlled and equilibrium is maintained as a priority. They are linear. (Schneider & Somers, 2006)

Complicated systems can be – at least in principle- fully understood and modelled. They can be entirely captured by suitable models.

The nature of problems:

Originate from causes that can be individually distinguished and can be addressed piece by piece.

For each input to the system there is a proportionate and predictable output.

They can be understood through expert knowledge, information collection and analysis and a solution can be applied that solves the problem for some time.

Technical knowledge drives solutions and ethical values may not be evident or important.

Complex System characteristics and thinking

The system cannot be controlled and best one can do is influence it.

The primary way to understand complex systems is through functional analysis – through the activities exerted by the system and the feedback across the system that changes it continuously.

The boundaries are fluid and flexible, disequilibrium is usual and growth is unpredictable. (Heifetz, 1994)

Complex systems are such that they are never fully graspable by any model: models of themeven in principle are always incomplete and diverge over time.

(Poli, 2013)

Emergence is a critical characteristic. Change occurs from within as a result of the interdependence of the people. Change includes unpredictable, need-based, bottom up feedback that is non-linear.

Adaption is a critical feature. Adaption is continuous change and learning in response to emergent feedback.

The nature of problems:

They result from multiple interacting causes that cannot be individually distinguished Must be addressed as entire systems, not in discrete parts. Small inputs may result in disproportionate effects. Problems can't be solved by repeating the same actions when it arises again.

Any interventions merge into a new environment that generates new problems. (Poli, 2013)

Choices for actions must be considered in ethical context of consequences. (Heifetz & Laurie, 2001)

The nature of authority and decision making. | The

Leaders hold formal positions of authority that works through stated structures, codes and rules.

Leadership is technical work requiring expertise limited to a few.

Leaders are 'shepherds, protecting their flock from harsh surroundings'

Solutions are the responsibility of the leader, with the help of others through consultative controlled processes.

Problem solving relies on organization charts and chains of command. The types of management tools typically used include project management software, standardised charts and tools and logical models. Documentation and specification is important and success mainly depends on the execution of a plan or process.

The nature of authority and decision making.

Leadership as authority is also informal and is practised by any agent in emergent communication between them. It is often not reliant on formal authority structures.

Leadership requires making choices and deciding requires learning, behaviour change, engagement and commitment from all stakeholders. (Thygeson, Morrissey, & Ulstad, 2010)

Leaders show care 'expose their followers to the painful reality of their condition and demand they fashion a response' (Heifetz & Laurie, 2001)

Solutions cannot be the responsibility of formal leaders but through the collective intelligence and shared responsibility of the people in the system at all levels.

Problem solving is intricate and cannot be predicted by linear relationships. There is a high degree of self-organising behaviour. Models that visualise interconnections and complexity are used to develop shared understanding of the problem. Ways forward are described with tools such as Balanced Score Card.

Leaders focus on engagement, learning, managing the levels of fear and uncertainty and expand the power available to everyone.

The criteriological inquiry concluded that schools are a particular type of open complex system and the term complex open adaptive systems (CASS) is proposed. The argument is that the concept of adaption captures the importance of learning and the continual need to adapt to the changing circumstances in schools as organisations located within communities that must respond to changes in public policy. It argue that schools as systems need also to be described as 'social' due to distinctive characteristics based on highly interactive, emotional, and personal relationships built up over extended time by the nature of the relationships between school staff and children's families within a distinct community. The criteriological inquiry concludes that schools then are largely complex adaptive social systems (CASS) with elements of technical, complicated systems. These technical elements are those required expert knowledge, such as teaching reading. How and where to act on this expertise informs decision making that is based on the complexity of making ethical choices about how to use scarce resources to meet multiple student need.

The inquiry also identifies the characteristics of open complicated systems and concludes that education literature and system level policies are based on these complicated characteristics. It is concluded that schools therefore are open, complex, social systems. There is, therefore, a misalignment between the real nature of schools as complex systems and the assumed and inaccurate representation of schools as complicated systems.

The inquiry concluded that a consequence of schools as complex social systems is that ethical choices for principals are normal, continuous and usually constitute a dilemma. This establishes a strong direct relationship between school as complex social systems and the presence of ethical decision making.

What is the case for arguing that education literature misunderstands or misinterprets the nature of schools as systems?

School leadership literature and professional development material pay little specific reference to the significance of schools' system characteristics as factors influencing the thinking, the decision-making, or the organisational culture. Those education researchers who do write about systems thinking all note this absence and explore the implications of consequent misunderstandings and assumptions. Duignan (2012) makes the observation that many attempts to change schools 'tend to use traditional, hierarchical, bureaucratic and linear structures and processes' (p. 23). Gough (2012) observes that 'concepts associated with simple systems persist in contemporary discourse of educations inquiry (p. 41) and *Tackling wicked problems: A public policy perspective* (Commission 2012) describes the disconnect between the complexity represented in the wicked problems that many public service organisations face and the persistent resilience of seeing them as complicated problems amenable to the approach Duignan describes.

There are numerous examples of contemporary school leadership and ethical school leadership texts that acknowledge the important of mental models and adopt metaphors that suggest complexity but remain examples of complicated systems. A range of high profile and influential writing is unclear and inconsistent about how it represents the nature of complexity and the application of a largely complicated systems mental model to the exploration of school culture and leadership persists.

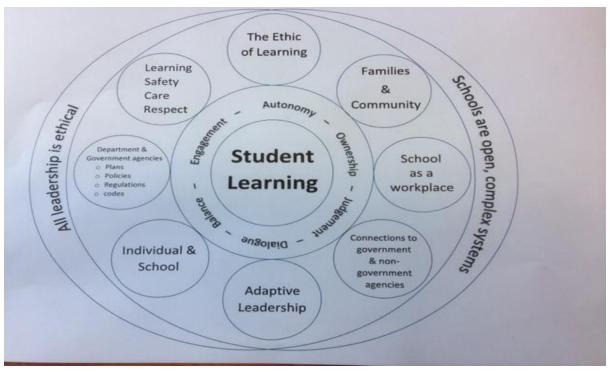
For example, Fullan and Quinn (2015) in a text on 'Coherence' note that 'mindsets matter' (p. 75) and use technical solution terms and processes such as 'drivers' and 'levers' to achieve coherence and do not consider complex system characteristics such as emergence, self organisation, informal authority, and sense making. Shapiro and Gross (2013) do the same in their work on 'turbulence' in which the metaphor is used as a temporary state that can be resolved or staff can be protected from it rather than identifying what they call turbulence as the 'perpetual white water' of schools that Starratt describes (1995, p. 4)

The school leadership literature reviewed rarely considers system thinking or the nature of how they system works because it is complex. Duignan is one who examines leadership through the explicit lens of schools as 'complex and dynamic organisations' (2012, p. 21). Murphy (2013) utilizes characteristics of complex adaptive social systems to explore the nature of ethical dilemmas in schools and how principals can respond effectively. He is an example of researchers and writers who do not explicitly identify complex system thinking but apply it effectively in their writing. Caldwell (Davies and Brundrett, 2010) and Cranston and Ehrich (2009) are others.

Principals' ethical priorities, their practice and their mental models.

This model is an overview of key findings and their relationships.

Model 1: A model of principals' ethical practice.



The model concentrates on the practice of ethical leadership rather than the purposes. Student learning is the unequivocal ethical centre of purpose. The next ring identifies the practices and principles that are most valued as features and of ethical practice.

The right hand side is interpreted as adaptive leadership in action and includes important elements of the school as an open complex system; no clear boundaries, diverse people to care for and work with and multiple stakeholders with formal and informal power and influence. The left hand side represent the competing ethical priorities within the school. These are played out through the relationships between the individual, families, community and government.

This paper explores some aspects of leadership practice and principals' motivations identified in this summary of their thinking.

Summary of principal reflections

The Principals responded to the ethical dilemmas they identified with a practical knowledge of several key characteristics of open complex social systems. Their actions were not directed by a conscious knowledge or application of systems theory or a knowledge of complexity leadership. There was little evidence that a theoretical construct of how schools work as systems was influential. The confluence of two influences framed their responses. One was the ethical purposes, decision making that were most important to them, and the second was their practical knowledge of the multiple relationships, the highly variable factors and the unique circumstances of every situation. During the interview process most identified that ethical dilemmas in schools occur in, and because of the complexity; what several called the 'learning space' or similar.

For all of them, ethical leadership consisted of making choices for action, often in the moment and always involving decisions that affected individuals. There was also little evidence of being

consciously influenced either by ethical theory, leadership theory or by professional codes or standards. Department of Education requirements and formal procedures were seen as legitimate, technical aspects of management rather than contributors to complexity.

The ethical purposes of school identified in the findings are consistent with some of themes in the ethical leadership literature in that care, rights and responsibility are shared priorities. There are different perspectives and priorities. They may be due to the unequivocal focus on leadership *in* the school without a sense of ethical responsibility for broad social or political critique or the social justice leadership in the community. Justice as a consequence of their school principal practice was commonly identified as was the view that many aspects of the students' life was beyond their control and the best opportunity for school influence was to improve learning, support families, and improve community self-respect through the quality of the school.

Ethical Leadership Themes

Principals' practice their leadership in complexity.

None of the participating principals consciously characterized the school as a system, complex or otherwise. They did however describe thinking and behaviour consistent with Sterman's definition of system thinking. It is 'the ability to see the world as a complex system, to understand how everything is connected to everything else' (Sterman, 2002, p. 2) in which you can't do just one thing' (Sterman, 1994, p. 291) because all the parts interact with each other. Each one provided evidence of a clear working awareness of these characteristics and at the same time described particular elements of open complex systems.

All participants in their semi-structured interviews identify the characteristics of open complex social systems. They described the open boundaries of the school as uncertain and the principal's role and responsibilities as not clearly defined. They understood schools as social in the sense that they are located in communities and a focal point for diverse personal relationships and interactions with formal agencies.

Several shared sub-themes are evident in the principals' understanding of the nature of schools as systems.

- School are full of unpredictable, surprising human behaviours. Deb noted that unpredictability is normal business as usual because families and their daily lives are connected constantly to the school through the students.
 - ... a great thing about our job is that you turn up and you never know what is going to happen. My mum's day was pretty much mapped out. Our day we don't know we deal with 150 odd families. 150 odd value sets and at school, some (families) have good and others bad days.
- They shared a sense of little control over diverse agents and organisations that influence their practice, usually associated with problems influenced outside the school that cannot be solved by the formal processes of the Department of Education or the formal authority of the principal's role. They described frustrated efforts to collaborate and negotiate with diverse stakeholders in changing circumstances and through informal agreements. The ethical dilemma stories they shared are all representative of Poli's observations 'that 'learning to dance' with a complex system is definitely different from 'solving' the problems arising from it (2013, p, 142).

• There is shared agreement that the competing needs and interests of multiple participants inside and outside the school are significant contributors to the ethical dilemmas that arise within the school.

Learning as an ethic in itself and systems thinking

The fundamental importance of learning as a process and a practice was foundational for every principal. Three noted that they were teachers who became principals and were conscious that the importance of learning as their purpose remained in the principal role. They all observed that they saw staff as learners and most noted the same approach to parents. One stated a view, evident in every interview, that 'leading requires seeing everyone as learners'.

None initially saw learning as the foundational ethic of their principalship in that they valued it most as both an outcome of their practice and the process utilized to achieve the improvements they were working towards. Their faith in the power of learning to change behaviour was acknowledged as a given when it was raised for response in interview and summarized by one who noted that teachers are lifelong learners as part of what it means to be professional.

The centrality of learning as an end in itself is not much evident in school leadership literature. The concept of *Schools that Learn* is the title of Senge's 2012 text but no participants identified his long-standing concept of learning organisations as a source of their thinking. Starratt's thinking on school leadership over several decades includes the powerful theme of school leaders 'leading a community of learners' (2012, p. 165). The principals did not mention his work and theme is not evident in most of the leadership text books included in this study. Learning is commonly described as a tool for change and a desired outcome but the construct of learning as a necessary and fundamental way of being and acting as a principal is not listed in the literature's shared ethical principles and purposes.

A number of complex system researchers and writers note the importance of learning as a feature of complex systems. Keshavarz & Nutbeam (2010) and Heifetz (1994, 2004) include as essential in their definition and Boulding (1956) identifies it as crucial in the eight level of systems in which he places social organization.

While there was **little explicit awareness of their system thinking**, there were high levels of compatibility between their ethical priorities, their leadership practice and how they understood the school to work as a system. The sharp focus on learning as both a universal purpose and the most effective process for leadership combines these three elements of the whole. Learning in both senses is, for all of them, a complex, social, unpredictable process of human engagement that identifies all people affected by a dilemma as participative learners. Learning therefore unites ethical purpose, ethical leadership practice, and the engagement of diverse agents in making the best judgments at any given time.

How principals understand ethical school leadership?

Principals' had shared and consistent views **about authority and power as expressions of leadership**. Those views align closely with leadership practice in complex adaptive social systems and those connections are a thread weaving through this research. The other theme is the belief in **learning and collaboration as an ethic in itself**, essential to the practice of ethical leadership.

Every participant saw school principal leadership as fundamentally ethical, for several reasons. This acknowledgement of the centrality of ethical choices is consistent with complexity theory

(Heifetz 2001) and some education writers such as McDaniel & Driebe (2005), Eyal (2011), Haynes (1998), Shapiro and Stefkovich (2010), and the often cited Starratt, Murphy, and Duignan. Relationships with children and their families, the role of the school in a community, and the short and long-term purpose of schooling were the dominant themes. These are also features of complex systems (Open Systems Criteria Framework). These dominant priorities, combined with the ethical principles valued most by participants, and the formal policies that bound their role as Department of Education employees, create the tensions that generate the ethical dilemmas identified by all participants. Participants were explicit about and conscious of this ever present dynamic.

Authority and power

The nature of authority and the use of power featured in every participant's response. The formal authority of the role was accepted as a responsibility by all participants as was its limited application, particularly in the context of ethical dilemmas. The reality of the role that the concepts influence and emergence play in organisation culture is acknowledged and the importance of learning, acceptance of shared responsibility, and engagement and commitment from all stakeholders (Thygeson, 2010) is identified. The importance and value of informal authority and shared accountability are common threads. Some quotations illustrate some shared views.

(Formal authority and power are) pretty much irrelevant to the way I manage a school. I have never even as a teacher looked at it as a power based industry. Luke

It's not loyalty to the person in authority that drives me. I say to my staff, 'No' when they say, 'I'll will do what you tell me because you're the boss'. I say to them that they will do it because it is the right thing to do. John

Notion of traditional power at the school does not exist. There are moments when I've got to say you've got to do this for this reason. But generally we are in an adaptive space around building capacity, a culture is very much driven around we are trying to work on differentiating, building relationship and trust all based on this is where we are heading for this reason. Deb

With me its try, feel, trial, discuss – an organic distribution of power. With others in the school, they want to gate keep, to control. I don't think I'll change those personalities – technical, positional authority. There are views, including parents about traditional school structures.

It comes down to everybody expects that the chair (John points to the principal's chair in his office) is responsible for the whole school. John

Learning and collaboration as ethical practice

The ways in which participants described decision making and engagement of staff, students, parents and the community in decision making also suggest a shared view about the relationship between ethical decision making and formal and informal authority. Several were specific in stating that shared decision-making is a characteristic of ethical leadership. There was also a view that decisions made through collaborative learning provide the basis for legitimacy in exercising the formal authority of the principal role. These quotations also capture the themes of the importance of learning as an ethical position itself and an essential process for change.

A cultural shift is an ethical thing. Everything you do and don't say makes the culture. You have to work with the staff to establish an agreement about how we are as a school. Ben

Ethical leadership as practice, rather than a role or position

All principals characterized leadership as a practice rather than a role. Both of these perspectives are evident in the literature. The construct of practice is consistent with a mental model of schools as complex while leadership as descriptions of roles and responsibilities aligns with the view of schools as complicated. The principals' view represents the theory proposed by MacIntyre (2007) and illuminated by Murphy (2013). In summary, a practice is the actions taken in response to what is understood as the particular value and purpose of the work while a role is defined by the codes, standards, and position descriptions of the position. Shapiro (2010, 2013) tends to take the latter position.

Several shared principles and beliefs represented principal understanding of ethical leadership as a practice.

- Schools are by their nature ethical enterprises because they consist of people, located within communities, driven by diverse relationships and perceptions of what is most important. Ethical dilemmas are therefore a normal part of school life and choices of ethical priorities are at the core of principalship.
- Ethical leadership practice is based on a belief that learning is both the fundamental purpose of schools and the ethical and effective means of doing their leadership work. Shared agreements are built through learning processes. That learning process and the resultant agreed understanding establish a legitimate basis for principal leadership. This suggests that learning is an ethic in itself.
- Ethical principalship is largely the everyday pragmatic application of these ethical processes and principles in particular circumstances. Ethical leadership is therefore a relational and situational practice.

Consequences and Implications

This research identifies a need to revisit tradition and acknowledge the new. The tradition is the deep foundations of philosophy on which contemporary ethical leadership literature is based unconsciously and the new is the complexity thinking largely undiscovered in the school leadership literature.

There are at least three areas for further research and professional learning support for school and education leaders. There is a need to find out more about what the people in schools are experiencing as a foundation for new policies, relevant support, and the re-imaging of what schools are.

Ethical Leadership

Principals acknowledge the nature of schools and school leadership as fundamentally ethical. This lived reality and the challenges of responding to ethical dilemmas are important possibilities for academic research and writing and the design and provision of professional learning. Inspiring writing, relevant theory, and case study approaches for supporting leadership learning already exist as strong foundations for a necessary resurgence. Although not currently evident in policies and professional learning, the ethical nature of schools eloquently explored by Starratt is so deeply important that a strong case can be made for focus

on the cultivation of ethical schools (2015) as a common priority theme across public education and in professional learning.

A rigorous critique of ethical school leadership appears warranted. The thesis invested in exploring the contemporary literature and writers and raises some challenges. One is the theoretical and philosophical rationales that appear to be largely accepted without deep analysis by other members of the community of writers and researchers. That critique might include the perspectives of the deep thinking that has gone before and challenge some constructs of integrity and intuition. The other is the lack of relevance the literature has to those applying ethical practice in their everyday lives. There is an opportunity to align the research and literature to contemporary principal leadership.

System thinking

Most of the literature reviewed and the policy documents are based on a worldview of schools as systems that does not represent reality. There is a small but eloquent and convincing body of research and writing inside education research available as a resource for the significant and needed acknowledgment. There is also a need for school leadership literature to look outward to the research into the many organisations with complexity system similarities to schools. People in schools are practicing in systems largely not recognised in the literature of in the professional learning support that is currently available in Australia.

Re-imaging schools

This research describes the daily lives of schools as human systems inextricably linked to diverse organisations and influenced by myriad beliefs and needs. The principals have captured the highly challenging circumstances created by this complex social system and described ways of working in this environment. There is an urgent need for further research into these ways of working ethically in complex systems and the consequences of continuing to work within mental maps that no longer fit the geography.

A most important and exciting research opportunity is inquiry into emerging models of working in this complexity and re-imaging schools away from an industrial model of control and limited purpose into a coherent deliberate response to what schools have become and are becoming.

References

- Beabout, B. R. (2012). Turbulence, perturbance, and educational change. *Complicity: An International Journal of Complexity and Education*, 9(2).
- Boal, K. B., & Schultz, P. L. (2007). Storytelling, time, and evolution: The role of strategic leadership in complex adaptive systems. *The Leadership Quarterly*, *18*(4), 411-428.
- Boulding, K. E. (1956). General systems theory-the skeleton of science. *Management science*, 2(3), 197-208.
- Commission, A. P. S. (2012). Tackling wicked problems: A public policy perspective.
- Cranston, N. C., & Ehrich, L. C. (2009). *Australian School Leadership Today*. Bowen Hills Qld: Australian Academic Press.
- Davies, B. & Brundrett, M. (Eds.), (2010). Developing Successful Leadership. London: Springer.
- Duignan, P. (2015). Authenticity in educational leadership: History, ideal, reality. *Leading and Managing*, 21(1), 1.
- Eyal, O., Berkovich, I., & Schwartz, T. (2011). Making the right choices: Ethical judgments among educational leaders. *Journal of Educational Administration*, 49(4), 396-413.
- Forrester, J. W. (1998). Designing the future. Work presented at Universidad de Sevilla, 15.
- Fullan, M., & Quinn, J. (2015). Coherence: The Right Drivers in Action for Schools, Districts, and Systems. Corwin: Sage Publications.
- Gough, N. (2012). Complexity, Complexity Reduction, and 'Methodological Borrowing' in Educational Inquiry. *Complicity: An International Journal of Complexity and Education*, 9(1). Haynes, F. (1998). *The Ethical School*. London: Routledge.
- Hazy, J. K., Goldstein, J., & Lichtenstein, B. B. (2007). Complex systems leadership theory: New perspectives from complexity science on social and organizational effectiveness: ISCE Pub.
- Heifetz, R. A. (1994). Leadership without easy answers (Vol. 465): Harvard University Press.
- Heifetz, R. A., Grashow, A., & Linsky, M. (2009). The practice of adaptive leadership: Tools and tactics for changing your organization and the world: Harvard Business Press.
- Heifetz, R. A., & Laurie, D. L. (2001). The work of leadership. *Harvard Business Review*, 79(11).
- Keshavarz, N., Nutbeam, D., & Rowling, L. (2010). Social complex adaptive systems. A response to Haggis. *Social Science & Medicine*, 70(10), 1478-1479. doi:http://dx.doi.org/10.1016/j.socscimed.2010.01.023
- Lichtenstein, B. B., & Plowman, D. A. (2009). The leadership of emergence: A complex systems leadership theory of emergence at successive organizational levels. *The Leadership Quarterly*, 20(4), 617-630.
- MacIntyre, A. (2007). *After Virtue. A Study in Moral Theory. Third Edition*. Notre Dame, Indiana: University of Notre Dame Press.
- Marion, R., Christiansen, J., Klar, H. W., Schreiber, C., & Erdener, M. A. (2016). Informal leadership, interaction, cliques and productive capacity in organizations: A collectivist analysis. *The Leadership Quarterly*, 27(2), 242-260.
- McDaniel, R. R., & Driebe, D. (2005). *Uncertainty and surprise in complex systems: questions on working with the unexpected*: Springer Science & Business Media.
- Morrison, K. (2001). Simplicity and complexity in contemporary school leadership: A response to grace. *British Journal of Educational Studies*, 49(4), 379-385.
- Morrison, K. (2011). Leadership for self-organisation: complexity theory and communicative action. *International Journal of Complexity in Leadership and Management, 1*(2), 145-163.
- Murphy, D. (2013). *Professional School Leadership. Dealing with Dilemmas*. (2nd ed.). Edinburgh: Dunedin Academic Press.
- Olson, E. E., & Eoyang, G. H. (2001). Facilitating organization change. *Jossey-Bass/Pfeiffer*.
- Pisapia, J. (2009). The strategic leader: New tactics for a globalizing world: Iap.

- Poli, R. (2013). A Note on the Difference Between Complicated and Complex Social Systems. *Cadmus. Promoting Leadership in Thought that Leads to Action*, 2(1).
- Rittel, H. W., & Webber, M. M. (1973). Dilemmas in a general theory of planning. *Policy sciences*, 4(2), 155-169.
- Senge, P. M., Cambron-McCabe, N., Lucas, T., Smith, B., & Dutton, J. (2012). Schools that learn (updated and revised): A fifth discipline fieldbook for educators, parents, and everyone who cares about education: Crown Business.
- Shapiro, J. P., & Gross, S. J. (2013). *Ethical educational leadership in turbulent times:(Re)solving moral dilemmas*. New York:Routledge.
- Shapiro, J. P., & Stefkovich, J. A. (2010). *Ethical leadership and decision making in education:*Applying theoretical perspectives to complex dilemmas. New York: Routledge.
- Starratt, R. J. (1995). Leaders with Vision: The Quest for School Renewal. ERIC: ED 389074
- Starratt, R. J. (2005). Ethical leadership. The essentials of school leadership, 61-74.
- Starratt, R. J., (2012). Cultivating an Ethical School. New York: Routledge.
- Sterman, J. D. (1994). Learning in and about complex systems. *System Dynamics Review*, 10(2), 291-330
- Thygeson, M., Morrissey, L., & Ulstad, V. (2010). Adaptive leadership and the practice of medicine: a complexity-based approach to reframing the doctor—patient relationship. *Journal of Evaluation in Clinical Practice*, 16(5), 1009-1015.