
Locating sustainable leadership within a typology of leadership in business

Errol Brandt

School of Management and Marketing,
Faculty of Business,
Charles Sturt University,
Bathurst, NSW, Australia
Email: ebrandt@csu.edu.au

Abstract: Corporate sustainability has become a topic of increasing importance for business leaders. A growing number of them are committing their organisations to corporate sustainability, a form of self-regulation which seeks to preserve social, environmental, and economic capital. This requires leaders to engage in transformational change, challenging organisational paradigms and introducing sustainable values into their organisations. Despite a considerable body of research on leadership in business, there is limited work to date on understanding the relationship between leadership and corporate sustainability. This conceptual paper begins to address this gap by exploring the concept of sustainable leadership. It proposes four types of leaders and the business context in which those leaders may be appropriate. This paper aims to locate sustainable leadership within a leadership typology which compares leadership approach with environmental beliefs. This may be used to better understand how leadership influences corporate sustainability within organisations.

Keywords: leadership; sustainable leadership; sustainability; sustainable development; corporate sustainability; servant leadership; transformational leadership; leadership questionnaire; sustainable leadership questionnaire; leadership typology; ecocentricism; anthropocentricism.

Reference to this paper should be made as follows: Brandt, E. (2016) 'Locating sustainable leadership within a typology of leadership in business', *Int. J. Intelligent Enterprise*, Vol. 3, Nos. 3/4, pp.190–204.

Biographical notes: Errol Brandt is a candidate for Doctor of Business Administration at Charles Sturt University in New South Wales, Australia. He received his Masters in Business Leadership from Charles Sturt University and is a Fellow of CPA Australia and works in a commercial management role in the private sector.

1 Corporate sustainability

It is a key responsibility of business leaders to ensure adequate capital is available to manage the short-term needs of the business. However, success in business may be fleeting unless the leaders also take a long-term view and manage capital sustainably.

Up until recently, the concept of capital was defined narrowly – including only those resources which sat within the business's sphere of influence.

Many business leaders today are considering the needs of people (social capital) and the planet (natural capital) alongside their need for profit (economic capital). This is known as the 'triple-bottom line' approach to business, a philosophy which is consistent with the principles of corporate sustainability (Elkington, 1998). Yet despite an observed increase in popularity of such ideas, there remain large pockets of resistance (Dyllick and Hockerts, 2002). The idea that business leaders must consider natural or social capital in decision-making is still considered alien to some. This may explain why some leaders reject corporate sustainability, while other leaders have chosen to embrace it.

1.1 Sustainability attitudes

The Brundtland Commission reshaped the paradigm of sustainable development by shifting the discussion away from the physical context of sustainability into a much wider socio-economic context (Adams, 2003). However Brundtland's definition was far from perfect and gave no guidance on managing conflict between various forms of capital. For example, should humankind prioritise protecting the biosphere from climate change ahead of a desire to lift poor nations from poverty? Brundtland's failure to provide a framework which would answer this question has led to a lasting debate about the priority of trade-offs where goals cannot be satisfied simultaneously.

This debate represents an important division within the sustainability literature. Two schools of thought have emerged: the 'weak' view of sustainability, emanating from the discipline of economics, and the 'strong' view, emanating from the discipline of environmental science. Rather than see the terms merge over time, they appear to have developed as mutually exclusive concepts with limited prospects for reconciliation (Hediger, 1999).

The 'weak' view of sustainability is an economic principle that emerged from neoclassical capital theory (Hediger, 1999). Nobel Laureate Robert Solow argued that natural capital could be legitimately transformed into human-produced capital for the benefit of humankind (Solow, 1974). This suggests economists believe that various forms of capital (natural, social and economic) can be substituted to maximise human utility. Opschoor and van der Straaten (1993) refined this by acknowledging the need to protect natural capital from recklessness, but argued that total welfare potential, rather than maximum utility, was a better objective. Nonetheless, proponents of weak sustainability have no problems viewing nature in terms of its economic value, thereby leading to a deep philosophical conflict with environmental scientists (van den Bergh, 2010).

The 'strong' view of sustainability contrasts this approach and has evolved from an ecological and scientific perspective. This puts primacy on maintaining a healthy ecosystem to sustain life, rather than maximising human utility or welfare from it (Costanza, 1991). Proponents of strong sustainability reject the idea that capital is substitutable because natural capital is the ultimate constraint; fishing boats have no value when there are no fish left to catch (Daly, 2007). More extreme proponents of this view hold that the environment itself has rights and deserves to be protected for its own sake (Nash, 1989). There appears to be little common ground.

This ongoing debate makes it difficult for business to operationalise sustainability. The weak view can be interpreted as 'business as usual', meaning nothing needs to change until a catastrophe is imminent (Dryzek, 1997). Although economists argue the

precautionary principle compels action without evidence in the face of a threat, there is no specific obligation on any particular business. Similarly, the strong view of sustainability is problematic as Costanza (1991) argued it obliges a minimum set of ecological standards be applied to all. Traditional economists would counter that government, not companies have the responsibility to set the minimum standards of behaviour (Friedman, 1970). Either way, there is no real obligation for any individual company to proactively change its behaviour, thereby making both 'weak' and 'strong' sustainability unsuitable concepts for business.

The field of environmental ethics offers a more practical path to operationalising sustainability in business. Dunlap and van Liere (1977) introduced the idea of an anthropocentric paradigm to represent a human-based approach to the environment. This corresponds with a weak view of sustainability and puts human needs ahead of the needs of the environment (Grey, 1993). Proponents may be considered optimists, as they believe humans can use science and technology to overcome any environmental problem (Diesendorf and Hamilton, 1997). Such views are refuted by pessimists, such as Dryzek (1997) who believe anthropocentric optimism is rhetoric of reassurance; humankind cannot have its cake and eat it too. Difficult choices between economic development and environmental protection will need to be made.

The ecocentric approach contrasts anthropocentrism and corresponds with a strong view of sustainability (Nash, 1989). Its proponents argue that attention to natural and social capital is essential; failing to protect them may lead to much more significant economic problems in the future (Daly, 2002). Some argue that our commercial and political systems fundamentally ignore natural capital (Daly and Cobb, 1989). They call for radical reform in the economy to prevent irreversible environmental and social collapse.

2 Role of leadership

2.1 Sustainability models

Although the debate between economists and ecologists remains unresolved, some leaders have started transforming their organisations into ones which consider business actions from a broader stakeholder perspective, thereby incorporating social and natural capital alongside economic capital (Kotler and Lee, 2005). Scholars are working to understand how this transformation occurs in practice. Among the first to do this was Hoffman (1999), who reviewed changes in environmental attitudes of the US chemical industry. Hoffman found that transformational change occurred as a result of external disruptive events, such as the community's response to Rachel Carson's popular book *Silent Spring*. Although he demonstrated that organisational change had occurred, he did not provide an understanding of how it occurred. This was a gap in the understanding which has been addressed more recently by scholars such as Doppelt (2003), Benn et al. (2006) and Lozano (2012) through their models of corporate sustainability.

These new models highlight the role that leadership plays. Doppelt (2003) identified seven sustainability 'blunders' that trap corporations into their existing paradigms. These are: patriarchal thinking; organisational silos; lack of sustainability vision; confusion between cause and effect; insufficient sustainability information; inadequate learning mechanisms; and failure to institutionalise sustainability. Doppelt argued that leadership

was the key to avoiding these blunders and was therefore central to transforming the company into one which embraces corporate sustainability.

Similarly, the *sustainability phase model* of Benn et al. (2006) suggested organisations transform through stages by embedding sustainability values into the organisational culture. This includes both the ‘hard-wired’ elements of structure and policy, and the ‘soft’ variables of people and culture. It is the role of leaders to address the ‘way things are done’ and create a climate where sustainable thinking is part of the organisation’s values. Lozano (2008) reinforced this by suggesting that embedding sustainability requires support from leaders to address congruence and consistency of informational, emotional and behaviour aspects of sustainability. These new models highlight that orchestrating corporate sustainability is a transformational process. It is a deliberate outcome of strategy, implemented through leadership and reinforced by organisational culture. Leadership is therefore a catalyst, through which new paradigms enter and are accepted by the organisation (Tideman et al., 2013).

3 Leadership

Academic interest in leadership extends back to Plato, who wondered about the qualities that distinguish leaders from followers (Takala, 1998). Much of the contemporary analysis on leadership has concentrated on leadership styles, but more recently, scholars have examined leadership philosophies and approaches to better understand how leadership works in practice. The main leadership styles and philosophies are discussed briefly below and examined for their relevance to corporate sustainability.

3.1 Leadership theory

As the scholarly interest in leadership coincided with industrialisation, a great deal of early leadership theory concentrated on what is now considered a transactional leadership style, a style which appeals to follower self-interest (Burns, 1978). Leaders offer followers reward in exchange for effort and outcomes. Transactional leaders work with their followers to recognise their task responsibilities, set performance goals, and instil confidence in the follower around meeting those goals (Bass, 1990). Although transactional leadership is often compared unfavourably with transformational leadership, Bass (1985) argued that transactional leaders can be effective in driving short-term performance, especially in workplaces where leaders are required to reinforce the existing culture, strategy and structure to maintain consistency (Vera and Crossan, 2004).

On the other hand, transformational leadership encourages higher levels of performance in followers by transcending the traditional reward-for-effort paradigm (Bass and Bass, 2009). Transformational leaders inspire their followers through leading-by-example, making them feel valued, providing intellectual stimulation and designing individual goals. In a dynamic corporate environment, transformational leaders are more successful if they can build cultures that encourage proactivity, empowerment and innovation (Smith et al., 2004). In addition to enhancing the performance of individuals, transformational leadership also improves the performance of teams and organisations (García-Morales et al., 2012; Bass et al., 2003).

The models of sustainability proposed by Doppelt (2003), Benn et al. (2006) and Lozano (2012) all indicate that leaders must achieve transformational change to install

new sustainability values into the organisation. Transformational change is dramatic and requires the organisation to abandon existing tasks, systems and policies. Change of this magnitude is often difficult for those who identify strongly with the existing culture and values. Therefore such change must be distinguished from transactional change, which is that which can be processed within the existing organisational frameworks and thereby absorbed without organisational upheaval (Burke and Litwin, 1992).

The transformational leader is better equipped to enable significant change because he or she appeals to the higher-order values of followers (Bass, 1985). This positions the transformational leader to orchestrate corporate sustainability through encouraging followers to pursue systems thinking, collaboration across boundaries and development of adaptive skills (Senge, 2008). Empirical evidence also links transformational leadership with other desirable corporate capabilities, such as creativity (Shung Jae and Jing, 2003), innovation (García-Morales et al., 2012), workplace safety (Bahn, 2013) and follower-value congruence (Groves and LaRocca, 2011).

The literature reveals other leadership styles can also be associated with corporate sustainability, including 'autocratic leadership' and 'charismatic leadership'. An autocratic leadership style, where the leader has total control over decision-making, is perhaps the antithesis of a transformational leadership style as it is undemocratic and has negative impacts on organisational stability. Similarly, charismatic leadership, where followers are drawn to a powerful leader figure, can also have similar adverse consequences when the leader does not work for the benefit of the organisation (Carter and Greer, 2013). Nonetheless, both autocratic and charismatic leaders can promote corporate sustainability and avoid selfish and anti-social behaviours by mandating clear behavioural boundaries (van Vugt et al., 2004; Messick and Brewer, 1983). In practice however, neither autocratic nor charismatic leadership styles are particularly desirable in modern corporate settings and are therefore not explored further in this analysis.

Transformational leadership is, however, considered a desirable style due to the empirical support for its effectiveness in achieving desired outcomes. Nonetheless, Groves and LaRocca (2011) found that transformational leadership can also be associated with socially irresponsible behaviour. They argued that leaders involved with major corporate scandals, such as Enron, Parmalat, Bear Stearns and WorldCom, were considered to display a transformational style. Subsequent analysis reveals that these leaders' personal values were inconsistent with the principles of corporate sustainability. This highlights the need for scholars to examine leadership philosophy alongside leadership style in describing an authentic form of transformational leadership.

This authentic form of transformational leadership requires considerable attention to the leader's values (Bass and Steidlmeier, 1999). The leader must exhibit moral character and express concerns for themselves and for others. The leader must embed his or her values into the organisation's vision, its articulation, and its program, which followers can either embrace or reject. These requirements are not explicit in a strict transformational style. Therefore, any analysis of leadership, particularly in a values-driven framework, requires an understanding of the leadership philosophy which underpins the leader's style.

Remarkably, empirical studies of socially-responsible corporate behaviour have largely ignored leadership philosophies (Waldman and Siegel, 2008). Such philosophies are significant, according to Angus-Leppan et al. (2010), because they may lead to different forms of socially-responsible corporate behaviour. For example, non-values-based leadership philosophies might be associated with an explicit form of

socially-responsible corporate behaviour, rather than one which is implicit and inherit in the organisation's ethos. This suggests corporate sustainability could be a deliberate product of strategy, and not based on a genuine desire to preserve natural or social capital. In its extreme, this may lead to 'greenwashing' – the deliberate overstatement of achievements for reputational or financial gain (Delmas and Cuerel Burbano, 2011).

3.2 Values-based leadership

Perhaps as a consequence of the corporate scandals described above, values-based leadership has become an area of interest for scholars. In general terms, values-based leadership represents a set of leadership philosophies which emphasise the relationship between the leaders' actions and his or her personal values (Peregrym and Wolff, 2013). This may include low-level values, such as diligence and perseverance, mid-level values, such as teamwork and innovation, or high-level values, such as integrity and courage (Lee, 2006).

Values-based leadership is not a single philosophy. Copeland (2014) examined the evolution of values-based leadership through the literature, as summarised in Table 1. Copeland found that despite considerable academic effort, many of these disciplines are immature, lacking a strong theoretical framework and supporting empirical research. Thus the linkage between values-based leadership and other fields, such as corporate sustainability, is not well explored.

Table 1 Values-based leadership philosophies

<i>Discipline</i>	<i>Example</i>
Servant leadership	Greenleaf (1977)
Stewardship	Block (1993)
Connective leadership	Lipman-Blumen (1996)
Self-sacrificial leadership	Choi and Mai-Dalton (1999)
Authentic transformational	Bass and Steidlmeier (1999)
Complex leadership	Marion and Uhl-Bien (2001)
Contextual leadership	Osborn et al. (2002)
Shared leadership	Pearce and Conger (2003)
Ethical leadership	Brown et al. (2005)
Authentic leadership	Walumbwa et al. (2008)
Relational leadership	Cunliffe and Eriksen (2011)

3.3 Non-value-based leadership

The analysis of values-based leadership invokes an obvious question: if leaders do not operate with a values-based philosophy, then what do they rely on to guide their leadership style? The literature indicates there are three main approaches: the trait-based approach, the skills-based approach and the contingency approach. These are examined from the perspective of contrast to a values-based leadership philosophy.

The trait-based approach to leadership was the dominant view of leadership up until the 1950s. Based on the ‘great man’ theory of Carlyle (1904), a trait-based approach suggests that innate characteristics of individuals predispose them to leadership. Stogdill (1948) reviewed the literature on trait-based theory and found that scholars had proposed that as many as 27 groups of traits were associated with leadership, including: appearance, intelligence, popularity, prestige and physique. Stogdill concluded this lack of consensus between scholars on the main traits challenged the basic premise of trait theory. Subsequently, this theory fell out of favour.

Nonetheless, the trait-based approach to leadership did not disappear completely. A number of scholars have recently presented more sophisticated variations on the original idea, such as Kouzes and Posner (2007), who reworked classical trait theory into a functional model of leadership based on ideal leadership traits. Similarly, Derue et al. (2011) found some relationship with traits such as gender, intelligence and personality with leadership effectiveness and leadership behaviour.

Another alternative to values-based leadership is the skills-based approach as proposed by Katz (1955) and later refined by Mumford et al. (2000). This approach treats leadership as a skill which can be learned and refined with practice and training. The skill of leadership includes the practical skills involved with problem-solving through technical knowledge, along with human skills involved with motivating and managing teams. High performing leaders can also use judgement and experience to make decisions, as this is considered an advanced leadership skill.

A third alternative is a contingency approach to leadership. This represents a further refinement of trait-based and skills-based approaches by emphasising their interplay with situational factors (Seyranian, 2010). This suggests the leader must continually adapt his or her behaviour, depending on each follower’s ability and willingness to complete the tasks required. This allows the leader to maximise productivity from each follower with an individualised approach (Hersey and Blanchard, 1969). Although first appearing almost 50 years ago, situational leadership is still somewhat understated in the leadership literature.

Nonetheless, these ideas are popular as pragmatic approaches to leadership in business. They give individuals the opportunity for leadership roles by encouraging learning and practising of leadership skills, much as one would practice technical skills such as carpentry and computer programming (Northouse, 2007). Although such leadership approaches are easy to understand, critics argue they are overly simplistic, especially when dealing with complex organisational issues such as conflict and motivation (Conger and Kanungo, 1998). Furthermore, the models are weak in predictive value, meaning that it is difficult to anticipate how a leader might react to an unusual or unexpected situation (Northouse, 2007).

3.4 Sustainable leadership

Sustainable leadership is the term applied to a leadership philosophy necessary for creating sustainable organisations. Poff (2010) saw sustainable leadership as simply a form of ethical leadership, whereas McCann and Holt (2010) saw it as more closely aligned with servant leadership. Avery and Bergsteiner (2010) conceptualised sustainable leadership as a pyramid of best practices and behaviours that would be expected of a sustainable leader. More recently, Tideman et al. (2013) saw sustainable leadership as an expanded form of transformational leadership with additional emphasis

on leadership values. Through examining these different views in detail, it is proposed that sustainable leadership follows a transformational leadership style which is supported by a value-based leadership philosophy.

This suggests that sustainable leaders are capable of transformational change and rely on value-based principles rather than skills and traits to guide their behaviours. This view is consistent with the case study work of Manz et al. (2011) in sustainable furniture manufacturer Herman Miller Inc. Their results revealed that the leaders at Herman Miller had developed a culture of innovation and mutual respect which enabled the organisation to thrive and set high levels of virtuous organisational behaviour. Peregrym and Wolff (2013) endorsed this view, arguing that “it is impossible to be effective, transformational leaders without practising values-based leadership”.

Values-based leadership does not automatically imply sustainable leadership. According to Lee (2006), the high-level values associated with values-based leadership include integrity and courage. While desirable values, they are expressions of a humanist approach to leadership which do not oblige the leader to consider the needs of the ecosystem. Therefore, it is further proposed that sustainable leadership requires the leader to operate with an ecocentric paradigm. That is, the leader holds a deep sense of ecological responsibility which goes beyond awareness of, or tolerance for the needs of the environment.

4 Sustainable leadership conceptual framework

4.1 Leadership typology

In examining the literature on sustainable leadership, there is limited work to date on developing a leadership typology which locates sustainable leadership within a range of styles observed in business. A notable contribution towards this was made by McCann and Holt (2010), who correlated subordinate perceptions of servant leadership with their perceptions of sustainable behaviour within the context of manufacturing companies in the USA. Although both servant leadership and sustainable behaviours have proven beneficial individually, the authors could not be certain that the two were compatible with each other and would lead to superior financial performance.

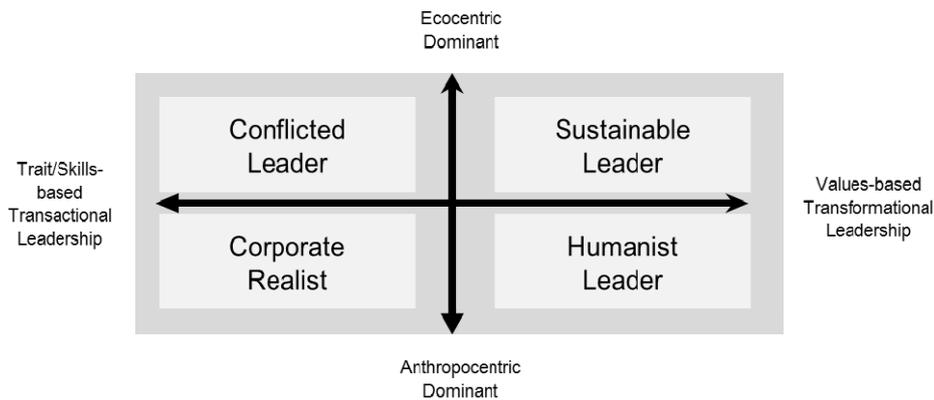
This desire to find a relationship between corporate sustainability and financial performance features heavily in the literature. It is perhaps premature to search for a relationship without first establishing the conceptual framework behind sustainable leadership. McCann and Holt (2010) argued that “the measuring of servant leadership and sustainability within an entity is the first step in determining the viability of using both systems congruently”. Therefore this paper seeks to provide a conceptual framework for sustainable leadership through development of a leadership typology.

Leadership typologies are not new. Even before Bass’ popularisation of transformational leadership in 1985, leadership scholars had already proposed numerous leader-behaviour typologies, many of which appeared to conflict with each other. Reddin (1977) synthesised a number of these into single framework, thereby distilling leadership knowledge for easier analysis. A similar approach has been used by other authors for leadership actions (Rooke and Torbert, 2005), leadership style (Pearce et al., 2003), and leadership personal values (Bruno and Lay, 2008). Therefore, rather than add to the

confusion, a typology of sustainable leadership aims to synthesise the existing knowledge and clarify what sustainable leadership is, and what it is not.

This leadership typology is based on the proposition that a sustainable leader is a values-based transformational leader who holds an ecocentric paradigm. Both the leadership philosophy and the concern for the environment are necessary conditions for sustainable leadership. Exploding this combination of attributes leads to four possible leadership types. These are represented diagrammatically in Figure 1 and explored in further detail.

Figure 1 Sustainability leadership conceptual framework



The first combination under this framework is a 'corporate realist'. This type of leader operates with an anthropocentric paradigm, meaning there would be a low-level of concern for the organisation's impact on the environment. As the leadership approach is not values-based transformational leadership, the leader would rely primarily on trait-based or skills-based leadership philosophies and employ a transactional style. This type of leader may find it difficult to introduce transformational change. They would, however, be capable of delivering short-term financial performance in a stable and structured environment. Environmental issues are only likely to attract the attention of this leader where such issues threaten financial performance.

- *Proposition 1:* the corporate realist thrives in a structured and stable workplace that has a low level of exposure to environmental concerns.

A second combination under this framework is the 'conflicted leader'. Like the 'corporate realist', this type of leader does not rely on a values-based transformational approach to leadership. However, unlike the 'corporate realist' this leader holds strong environmental beliefs and may feel conflicted through disconnection with the organisation's values and actions. Difficulty arises for this leader because he or she is unable to translate environmental values into transformational change within the organisation. Although this leader may introduce sustainability initiatives, those changes may not become embedded into the values of the organisation.

- *Proposition 2:* the conflicted leader would find a workplace challenging in a changing and unstructured workplace where the environmental concerns are high.

A third combination is called the 'humanist leader'. This type operates with a values-based transformational leadership approach and would therefore be likely to succeed at embedding new values into the organisation. This leader's anthropocentric paradigm would, however, indicate a low level of concern for the environment, meaning the leader's attention would be focussed on developing economic capital and, to some extent, social capital. This leader balances the shareholder's need for short-term results with the longer-term needs of the organisation's stakeholders, and may be well suited to complex and dynamic organisations where there are a few specific environmental concerns. He or she may be well suited to an organisation with a commitment to social responsibility, but not necessarily corporate sustainability.

- *Proposition 3:* the humanist leader would work well in a changing and unstructured workplace where the environmental concerns are low.

The final possible combination is the 'sustainable leader'. This leader takes a values-based transformational leadership approach and holds strong environmental views. This combination enables the leader to recognise the need for organisational change and have the appropriate skills to achieve it. This leader may not be suited to a corporate environment where there is a strong focus on short-term results. In fact, there may be pressure from shareholders to focus less on preserving natural capital, and focus more on economic capital, making for a difficult relationship. However, over the longer term, this type of leader is likely to foster an organisational culture which promotes innovation and social responsibility. Where the leader's performance is measured across a broad set of objectives, this leader's legacy may be well regarded by the organisation's stakeholders.

- *Proposition 4:* the sustainability leader would work well in a changing and unstructured workplace where the environmental concerns are high.

5 Discussion

Corporate sustainability has become an important issue for business leaders around the world. This can be evidenced by the adoption of corporate sustainability reporting standards, such as the global reporting initiative (GRI). According to Marimon et al. (2012) adoption of the GRI may reach worldwide saturation in 2015. Yet despite its popularity in business, Montiel and Delgado-Ceballos (2014) argue that practitioners have failed in their objective to inform management practice about sustainable development. That is, sustainability remains an abstract concept which hard to operationalise in business.

It is therefore not safe to assume that increased activity in corporate sustainability implies increasing concern for the environment by business leaders. For example, Delmas and Cuerel Burbano (2011) described various forces which act on business leaders to encourage overstatement or deception of stakeholders on environmental actions. In extreme cases this could be considered greenwashing, but more subtle overstatements could simply be regarded as public relations or reputation management. Nonetheless, this highlights the difficulty for researchers and stakeholders in assessing the sincerity of efforts towards corporate sustainability.

Overcoming this problem requires a deeper understanding of corporate sustainability antecedents. As indicated by the corporate sustainability models proposed by Doppelt (2003), Benn et al. (2006) and Lozano (2012), leadership plays a critical part in incorporating sustainability values into the organisation's culture. Development of a leadership typology which defines sustainable leadership would appear to be a useful contribution to this understanding.

This leadership typology represents a set of ideal types based on a dominant leadership approach and environmental attitude. In practice, human behaviours sit on a spectrum and are moderated by context. A typology is merely a simplified tool for categorising behaviours. It can therefore be used to predict how a sustainable leader may act in given circumstances, but does not preclude the leader from acting differently in any specific situation. Such labels describe norms which may apply over large populations. Nonetheless, if such a typology represents the reality of business leaders, then it simplifies the work of researchers to infer and test relationships between sustainable leadership and other organisational measures, such as long-term financial performance.

This typology does not assume that sustainable leadership is common of business leaders. The specific points at which the quadrants are defined in Figure 1 must be induced based on sampling, as neither leadership approach nor environmental attitudes can be assumed to be normally distributed within the business leadership population. In fact, existing economic models may actively encourage 'corporate realists', as suggested by Daly and Cobb (1989) and Starik and Turcotte (2014). Therefore, only through examining the statistical outliers in such a typology may we infer a cohort of sustainable leaders.

6 Summary and conclusions

The models of corporate sustainability highlight the importance of leadership in the orchestration of corporate sustainability. Leadership plays a key part in this transformation process, and the literature indicates that a values-based leadership approach is likely to be essential. However with the exception of McCann and Holt (2010) there appears to be limited work done to explore the relationship between values-based leadership and corporate sustainability within business.

This paper has proposed a typology for sustainable leadership which could be applied in subsequent research on corporate sustainability. The next steps are to select the appropriate instruments for measuring values-based leadership, transformational leadership and environmental paradigm. There are a number of instruments already available and these must be evaluated in terms of their reliability and application to a research question.

The implications of this typology are straightforward. It creates a language around leadership types which may be tested and defined empirically. This allows comparison across organisations, industries and over time. This is an important step towards understanding how leadership affects corporate sustainability. This elevates the understanding of sustainability leadership from a descriptive definition, into one which may be empirically tested and correlated with other organisational measures.

References

- Adams, W.M. (2003) *Green Development: Environment and Sustainability in the Third World*, Taylor & Francis.
- Angus-Leppan, T., Metcalf, L. and Benn, S. (2010) 'Leadership styles and CSR practice: an examination of sensemaking, institutional drivers and CSR leadership]', *Journal of Business Ethics*, Vol. 93, No. 2, pp.189–213.
- Avery, G.C. and Bergsteiner, H. (2010) *Honeybees & Locusts: The Business Case for Sustainable Leadership*, Allen & Unwin, Crows Nest, NSW.
- Bahn, S. (2013) 'Transformational leaders? The pivotal role that supervisors play in safety culture', *International Journal of Training Research*, Vol. 11, No. 1, p.17.
- Bass, B.M. (1985) 'Leadership: good, better, best', *Organizational Dynamics*, Vol. 13, No. 3, pp.26–40.
- Bass, B.M. (1990) 'From transactional to transformational leadership: learning to share the vision', *Organizational Dynamics*, Vol. 18, No. 3, pp.19–31.
- Bass, B.M., Avolio, B.J., Jung, D.I. and Berson, Y. (2003) 'Predicting unit performance by assessing transformational and transactional leadership', *Journal of Applied Psychology*, Vol. 88, No. 2, pp.207–218.
- Bass, B.M. and Bass, R. (2009) *The Bass Handbook of Leadership: Theory, Research, and Managerial Applications*, Free Press, New York.
- Bass, B.M. and Steidlmeier, P. (1999) 'Ethics, character, and authentic transformational leadership behavior', *The Leadership Quarterly*, Vol. 10, No. 2, pp.181–217.
- Benn, S., Dunphy, D. and Griffiths, A. (2006) 'Enabling change for corporate sustainability: an integrated perspective', *Australasian Journal of Environmental Management*, Vol. 13, No. 3, pp.156–165.
- Block, P. (1993) *Stewardship: Choosing Service Over Self-Interest*, Berrett-Koehler, San Francisco.
- Brown, M.E., Treviño, L.K. and Harrison, D.A. (2005) 'Ethical leadership: a social learning perspective for construct development and testing', *Organizational Behavior and Human Decision Processes*, Vol. 97, No. 2, pp.117–134.
- Bruno, L. and Lay, E. (2008) 'Personal values and leadership effectiveness', *Journal of Business Research*, Vol. 61, No. 6, pp.678–683.
- Burke, W.W. and Litwin, G.H. (1992) 'A causal model of organizational performance and change', *Journal of Management*, Vol. 18, No. 3, pp.525–545.
- Burns, J.M. (1978) *Leadership*, Harper & Row, Onursal Arkan, New York.
- Carlyle, T. (1904) *On Heroes, Hero-Worship, and the Heroic in History*, Oxford University Press, London.
- Carter, S.M. and Greer, C.R. (2013) 'Strategic leadership: values, styles, and organizational performance', *Journal of Leadership & Organizational Studies*, Vol. 20, No. 4, pp.375–393.
- Choi, Y. and Mai-Dalton, R. (1999) 'The model of follower responses to self-sacrificial leadership: an empirical test', *The Leadership Quarterly*, Vol. 9, No. 4, pp.475–501.
- Conger, J.A. and Kanungo, R.N. (1998) *Charismatic Leadership in Organizations*, Sage, Thousand Oaks, CA.
- Copeland, M.K. (2014) 'The emerging significance of values based leadership: a literature review', *International Journal of Leadership Studies*, Vol. 8, No. 2, pp.105–135.
- Costanza, R. (1991) 'The ecological economics of sustainability', in Goodland, R., Daly, H.E., El Serafy, S. and von Droste, B. (Eds.): *Environmentally Sustainable Economic Development: Building on Brundtland*, UNESCO, Paris.
- Cunliffe, A.L. and Eriksen, M. (2011) 'Relational leadership', *Human Relations*, Vol. 64, No. 11, pp.1425–1449.

- Daly, H. (2002) *Sustainable Development: Definitions, Principles, Policies*, Invited Address to the World Bank, Washington, DC.
- Daly, H. (2007) *Ecological Economics and Sustainable Development*, Edward Elgar Publishing, Cheltenham, UK.
- Daly, H. and Cobb, J. (1989) *For the Common Good: Redirecting the Economy Towards Community, the Environment and Sustainable Development*, Green Print, London.
- Delmas, M.A. and Cuerel Burbano, V. (2011) 'The drivers of greenwashing', *California Management Review*, Vol. 54, No. 1, pp.64–87.
- Derue, D.S., Nahrgang, J.D., Wellman, N. and Humphrey, S.E. (2011) 'Trait and behavioural theories of leadership: an integration and meta-analytic test of their relative validity', *Personnel Psychology*, Vol. 64, No. 1, p.7.
- Diesendorf, M. and Hamilton, C. (1997) *Human Ecology, Human Economy: Ideas for an Ecologically Sustainable Future*, Allen & Unwin, St. Leonards, NSW.
- Doppelt, B. (2003) *Leading Change Toward Sustainability: A Change-Management Guide for Business, Government and Civil Society*, Greenleaf Publishing, Sheffield, UK.
- Dryzek, J.S. (1997) *The Politics of the Earth: Environmental Discourses*, Oxford University Press, Oxford.
- Dunlap, R.E. and van Liere, K.D. (1977) 'Land ethic or golden rule: comment on 'land ethic realized' by Thomas A. Heberlein, JSI, 28(4), 1972', *Journal of Social Issues*, Vol. 33, No. 3, pp.200–207.
- Dyllick, T. and Hockerts, K. (2002) 'Beyond the business case for corporate sustainability', *Business Strategy and the Environment*, Vol. 11, No. 2, pp.130–141.
- Elkington, J. (1998) *Cannibals with Forks: The Triple Bottom Line of 21st Century Business*, New Society Publishers, Gabriola Island, BC.
- Friedman, M. (1970) 'The social responsibility of business is to increase its profits', *The New York Times Magazine*, New York Times, New York.
- García-Morales, V.J., Jiménez-Barrionuevo, M.M. and Gutiérrez-Gutiérrez, L. (2012) 'Transformational leadership influence on organizational performance through organizational learning and innovation', *Journal of Business Research*, Vol. 65, No. 7, pp.1040–1050.
- Greenleaf, R. (1977) *Servant Leadership*, Jossey-Bass, San Francisco.
- Grey, W. (1993) 'Anthropocentrism and deep ecology', *Australasian Journal of Philosophy*, Vol. 71, No. 4, pp.463–475.
- Groves, K. and Larocca, M. (2011) 'Responsible leadership outcomes via stakeholder CSR values: testing a values-centered model of transformational leadership', *Journal of Business Ethics*, Vol. 98, No. 1, pp.37–55.
- Hediger, W. (1999) 'Reconciling 'weak' and 'strong' sustainability', *International Journal of Social Economics*, Vol. 26, Nos. 7/8/9, p.1120.
- Hersey, P. and Blanchard, K.H. (1969) 'An introduction to situational leadership', *Training and Development Journal*, Vol. 23, No. 5, pp.26–34.
- Hoffman, A.J. (1999) 'Institutional evolution and change: environmentalism and the US chemical industry', *Academy of Management Journal*, Vol. 42, No. 4, pp.351–357.
- Katz, R.L. (1955) 'Skills of an effective administrator', *Harvard Business Review*, Vol. 33, No. 1, pp.33–42.
- Kotler, P. and Lee, N. (2005) *Corporate Social Responsibility: Doing the Most Good for your Company and your Cause*, 1st ed., Wiley, New York.
- Kouzes, J.M. and Posner, B.Z. (2007) *The Leadership Challenge*, 4th ed., Jossey-Bass, San Francisco, CA.
- Lee, G. (2006) *Courage: The Backbone of Leadership*, Jossey-Bass, San Francisco, CA.
- Lipman-Blumen, J. (1996) *The Connective Edge*, Jossey-Bass, San Francisco.

- Lozano, R. (2008) 'Developing collaborative and sustainable organisations', *Journal of Cleaner Production*, Vol. 16, No. 4, pp.499–509.
- Lozano, R. (2012) 'Orchestrating organisational changes for corporate sustainability: overcoming barriers to change', *Greener Management International*, No. 57, pp.43–64.
- Manz, C.C., Manz, K.P., Adams, S.B. and Shipper, F. (2011) 'Sustainable performance with values-based shared leadership: a case study of a virtuous organization', *Canadian Journal of Administrative Sciences*, Vol. 28, No. 3, pp.284–296.
- Marimon, F., Alonso-Almeida, M., Rodríguez, M. and Cortez Alejandro, K. (2012) 'The worldwide diffusion of the global reporting initiative: what is the point?', *Journal of Cleaner Production*, No. 33, pp.132–144.
- Marion, R. and Uhl-Bien, M. (2001) 'Leadership in complex organizations', *The Leadership Quarterly*, Vol. 12, No. 4, pp.389–418.
- Mccann, J.T. and Holt, R.A. (2010) 'Servant and sustainable leadership: an analysis in the manufacturing environment', *International Journal of Management Practice*, Vol. 4, No. 2, pp.134–148.
- Messick, D.M. and Brewer, M.B. (1983) 'Solving social dilemmas: a review', *Review of Personality and Social Psychology*, Vol. 4, No. 1, pp.11–44.
- Montiel, I. and Delgado-Ceballos, J. (2014) 'Defining and measuring corporate sustainability', *Organization & Environment*, Vol. 27, No. 2, pp.113–139.
- Mumford, M.D., Zaccaro, S.J., Connelly, M.S. and Marks, M.A. (2000) 'Leadership skills: conclusions and future directions', *The Leadership Quarterly*, Vol. 11, No. 1, pp.155–170.
- Nash, R.F. (1989) *The Rights of Nature: A History of Environmental Ethics*, University of Wisconsin Press, Madison.
- Northouse, P.G. (2007) *Leadership: Theory and Practice*, Sage, Thousand Oaks, CA.
- Opschoor, H. and van der Straaten, J. (1993) 'Sustainable development: an institutional approach', *Ecological Economics*, Vol. 7, No. 3, pp.203–222.
- Osborn, R., Hunt, J. and Jauch, L. (2002) 'Toward a contextual theory of leadership', *The Leadership Quarterly*, Vol. 13, No. 6, pp.787–837.
- Pearce, C.L. and Conger, J.A. (2003) *Shared Leadership: Reframing the Hows and Whys of Leadership*, Sage, Thousand Oaks, CA.
- Pearce, C.L., Sims Jr., H. P., Cox, J.F., Ball, G., Schnell, E., Smith, K.A. and Trevino, L. (2003) 'Transactors, transformers and beyond: a multi-method development of a theoretical typology of leadership', *Journal of Management Development*, Vol. 22, No. 4, pp.273–307.
- Peregryn, D. and Wolff, R. (2013) 'Values-based leadership: the foundation of transformational servant leadership', *The Journal of Values-Based Leadership*, Vol. 6, No. 2, pp.1–12.
- Poff, D. (2010) 'Ethical leadership and global citizenship: considerations for a just and sustainable future', *Journal of Business Ethics*, Vol. 93, No. 1, pp.9–14.
- Reddin, W.J. (1977) 'An integration of leader-behavior typologies', *Group and Organization Studies*, Vol. 2, No. 3, pp.282–293.
- Rooke, D. and Torbert, W.R. (2005) '7 transformations of leadership', *Harvard Business Review*, Vol. 83, No. 4, p.66.
- Senge, P.M. (2008) *The Necessary Revolution: How Individuals and Organizations are Working Together to Create a Sustainable World*, Doubleday, New York.
- Seyranian, V. (2010) 'Contingency theories of leadership', in Levine, J.M. and Hogg, M.A. (Eds.): *Encyclopedia of Group Processes & Intergroup Relations*, Sage, Thousand Oaks, CA.
- Shung Jae, S. and Jing, Z. (2003) 'Transformational leadership, conservation, and creativity: evidence from Korea', *Academy of Management Journal*, Vol. 46, No. 6, pp.703–714.
- Smith, B.N., Montagno, R.V. and Kuzmenko, T.N. (2004) 'Transformational and servant leadership: content and contextual comparisons', *Journal of Leadership & Organizational Studies*, Vol. 10, No. 4, p.80.

- Solow, R.M. (1974) 'Intergenerational equity and exhaustible resources', *The Review of Economic Studies*, Vol. 41, No. 1, pp.29–45.
- Starik, M. and Turcotte, M-F. (2014) 'With a little (urgent) help from our friends', *Organization & Environment*, Vol. 27, No. 1, pp.3–9.
- Stogdill, R. (1948) 'Personal factors associated with leadership: a survey of the literature', *Interdisciplinary and Applied*, Vol. 25, No. 1, pp.35–71.
- Takala, T. (1998) 'Plato on leadership', *Journal of Business Ethics*, Vol. 17, No. 7, pp.785–798.
- Tideman, S.G., Arts, M.C. and Zandee, D.P. (2013) 'Sustainable leadership: towards a workable definition', *The Journal of Corporate Citizenship*, Vol. 49, No. 1, p.17.
- van den bergh, J.C.J.M. (2010) 'Externality or sustainability economics?', *Ecological Economics*, Vol. 69, No. 11, pp.2047–2052.
- van Vugt, M., Jepson, S.F., Hart, C.M. and de Cremer, D. (2004) 'Autocratic leadership in social dilemmas: a threat to group stability', *Journal of Experimental Social Psychology*, Vol. 40, No. 1, pp.1–13.
- Vera, D. and Crossan, M. (2004) 'Strategic leadership and organizational learning', *Academy of Management Review*, Vol. 29, No. 2, p.222.
- Waldman, D.A. and Siegel, D. (2008) 'Defining the socially responsible leader', *The Leadership Quarterly*, Vol. 19, No. 1, pp.117–131.
- Walumbwa, F.O., Avolio, B.J., Gardner, W.L., Wernsing, T.S. and Peterson, S.J. (2008) 'Authentic leadership: development and validation of a theory-based measure', *Journal of Management*, Vol. 34, No. 1, p.89.