



## **Missed opportunities: collaborative leadership, sustainable development and the academy**

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### **Abstract**

Fundamentally, leadership is the facilitation of betterment. In the context of sustainable development (SD), such betterment is interpreted as an on-going quest for inter-generational, inclusive, and integrated improvements in social equity and economic prosperity in ways which preserve ecological integrity. The sustainable development concept was introduced and defined in the Brundtland Report (*Our Common Future*), released in 1987 by the World Commission on Environment and Development (WCED, 1987). The hope, following its publication, was that leadership in both the public and private sectors of the world's nations, would collaborate with each other and across the globe in the adoption of SD principles and associated practices. The substance and the scale of the intellectual and moral challenges presented by these principles and practices represented nothing less than a call for a shift in the dominant development paradigm. In turn, this also dictated the need for transformations of prevailing cultural worldviews and development discourse, as well as the redistribution of power relationships. There is little to suggest that the academy has risen to the challenge that this represents which, in turn, reflects missed opportunities both to contribute to the needed epistemic transformations as well as to reaffirming its relevance as a responsible institution.

Current evidence with respect to persistent social inequities, faltering economies, and continuing ecological degradations across the globe, suggests that the necessary paradigmatic shift and associated intellectual and moral transformations, remain significantly incomplete. This is despite the renewed impetus of the identification and promulgation of the 17 Sustainable Development Goals of the United Nations 'Agenda 2030'. These matters are of central concern to institutions of higher education. The implications for their involvement extend considerably beyond their conventional functions of teaching and research to also embrace the scholarship of critical discursive engagement and collaborative leadership in pursuit of paradigmatic change.

**Keywords:** Planetary boundaries, paradigm, worldview, leadership

## 1. Introduction

Never in human history has the need for collaborative leadership been more essential, with universities having a critical, but essentially as yet unrealised role to play. The call is for a focus on leadership *by* institutions of higher education. The nature of leadership in this context is best captured by its description as a ‘complex moral relationship between people, based on trust, obligation, commitment, emotion and a shared vision of the good’ (Ciulla, 2014). Such relationships are nurtured through critical discourse which is characterised by three essential attributes (i) it helps establish social identities, (ii) it enables social relationships, and (iii) most significantly in the present context, it contributes to the construction of systems of knowledge and beliefs (Fairclough, 1992). And it is this latter characteristic that ought to be a central function of the academy. We humans have reached such a crisis regarding our relationships with the planet, that the only (and very urgent) way forward is for us to collectively ‘learn our way out’ (Milbrath, 1989). The crux of our argument here is that it is not just a matter more learning, vital though new knowledge unequivocally is, but on learning how to learn differently; learning how to construct new systems of knowledge and beliefs to inform better, more effective, more responsible, more defensible actions – and doing that in collaboration with as many institutions, organisations, and citizens, as possible.

In essence, we humans face an existential crisis that we have brought upon ourselves through our disregard, and indeed disrespect, for the rest of nature. The Academy has a major contribution to make in this regard in helping to address this dire circumstance beyond what universities have long been doing with impressive reforms in education and extraordinary insights through innovative agendas for research.

The challenge is for nothing less than the collective generation and promulgation of a new paradigm that leads to vastly improved collaborative relationships between we humans and the rest of the natural world: and our response must be urgent and critical.

## 2. The existential threat

We have been placing such unprecedented pressure on the planet, that we are facing the prospect that the Earth system might no longer support the conditions necessary for the survival of our species (Rockström et al., 2009). With six of the nine recognised planetary boundaries transgressed, the planet itself is regarded as being ‘well outside the safe operating space for humanity’ (Richardson et al., 2023). Life on planet earth is besieged (Ripple et al., 2023).

Along with biosphere integrity, and biogeochemical flows, the changing climate is also one of the boundaries that has been transgressed and while it may not indicate the end of the world, it could signal ‘the end of the world as we have come to know it’ (Ison, 2010). The signals are now virtually impossible to ignore. 2023 was the hottest year ever recorded and levels of carbon dioxide in the atmosphere were at an unparalleled high (IPCC, 2023). The rates at which glaciers are melting, oceans are warming, sea levels are rising and the incidence of hurricanes and cyclones, plus heat waves of extra ordinary intensity, are all increasing. These events are providing tangible evidence of a situation that is increasingly grim, despite all that we have been doing to turn things around within the rubric of sustainable development. The accelerated rate of species extinction, the desertification and erosion of soils, the continuing loss of biodiversity and the rates of land clearing and deforestation, the increased risk of disease transmission from closer contact with wildlife, and major threats of major disruptions to global oceanic currents, while less obvious, further amplify the scale of the crisis that we now face. By some accounts at least, every region of the world is likely to face increasing hazards

associated with the heating planet which could present multiple risks to humans and ecosystems alike (IPCC, 2023).

Global warming was identified as one of the key factors, along with the lingering impacts of COVID 19 pandemic, the war in Ukraine, and a gloomy global economic outlook, that contributed to the submission that the majority of the 17 sustainable development goals of the UN's Agenda 2030, were 'seriously off track' (UNDESA, 2023). Ironically, in our quest for modernisation through industrialisation in the name of development, we have reached a point where we need to turn our focussed attention to repairing all the damage that we have been doing to the planet essentially since the start of the industrial age of so-called modernism.

How has it come to this? Why have we failed to ignore the lessons of the past?

### 3. A historical context

It's not as if we humans haven't been warned of the potentially devastating consequences of our actions with respect to the rest of nature. A half a century has passed since it was proclaimed that 'a point has been reached in history when we must shape our actions throughout the world with a more prudent care for their environmental consequences' (UN Stockholm, 1972). This was the sixth of seven proclamations issued in the Stockholm Declaration from that conference and it continued with the warning that 'through ignorance or indifference we can do massive and irreversible harm to the earthly environment on which our life and well-being depend'. (Stockholm *ibid*).

Not even that warning came as a complete surprise either. Even as the American civil war continued to rage, a scholar in that country emphasised the impact that human activities were having upon 'both the crust of the earth and the atmosphere which surrounded it' (Marsh, 1864). Marsh drew upon a host of accounts of past historical events to illustrate his contention which included what Jared Diamond would, very much later, identify as the triggers for the loss of entire civilisations (Diamond, 2005).

A central feature of *Man and Nature* was Marsh's call for critical attention be paid not just to the conservation of nature but for its regeneration by 'tasking man's (sic) ingenuity and energy' to 'renovate a nature drained by his improvements'. An explicit moral dimension was added to this submission when, many decades later, Aldo Leopold presented what he referred to as The Land Ethic: 'a thing is right when it tends to preserve the integrity, stability, and beauty of the biotic community. It is wrong what it tends otherwise' (Leopold, 1949). With this claim, he provided a framework for considering the essential matter of the moral basis of decisions regarding our relationships with the rest of nature and the imperative to consider the ecological consequences of our actions and intentions.

A series of bestselling books that included *Silent Spring* (Carson, 1962), *The Population Bomb* (Ehrlich, 1968) and the *Limits to Growth* (Meadows et al., 1972) all provided potent evidence, over subsequent years, to support Marsh's plea with at least shades of Leopold's moral imperative also distinguishable in their narratives. There is little doubt that these texts contributed to very marked increases in concern for the relationships between we humans and our environment. A vitally significant paper also published in 1972 linking man-made carbon dioxide with global warming through the emission of greenhouse gases (Sawyer, 1972), regrettably received far less attention. The prescience of the British scholar who published that work in the prestigious journal *Nature*, proved remarkable with his estimates of the increases that would occur in atmospheric carbon dioxide, unless changes were made in the way we live our lives. Subsequent events have proved him right on both counts.

The levels of environmental activism, the increased focus of scientific research, the introduction of university courses in environmental science and ecology, and a plethora of

conferences, public forums and the publication of books and papers during the late 1960s and early 1970s, certainly attracted the attention of policy makers across the globe with respect to relationships between humans and the rest of nature.

Such was the influence of all these activities that the United Nations General Assembly established an international initiative to explore what it referred to as The Human Environment with an explicit focus on social development. A significant concern was the tensions between the high- and low-income countries with respect to the states and rates of their existing and potential future developments. The highpoint of this venture was the staging of the international conference in Stockholm in 1972 with high-ranking government officials from 114 national governments among the participants. A comprehensive Declaration was issued at the end of the Conference which contained a detailed action plan for policy development within and between nations of the world as well as with the General Assembly itself (UN Stockholm, 1972). It is of considerable interest to note that of the 109 items noted in its proposed Action Plan, only eight (8) dealt directly with relationships between the environment and development. In essence the report adopted a remedial focus intended to limit environmental damage, or where possible repair it, but not to check the process of economic and social development. As one commentator has observed 'the principal strategy was to legalise the environment as an economic externality' (Kidd, 1992). The report noted that the achievement of this environmental goal 'would demand the acceptance of responsibility by citizen communities by enterprises and institutions at every level, all sharing equitably in common efforts. This was an early example of a collaborative leadership in action, on a truly global scale by the United Nations with the conference calling upon 'governments and peoples to exert common efforts for the preservation of an improvement of the human environment, for the benefit of all the people and for their posterity'. This was the beginning of a commitment to sustainable development that has itself been sustained as evidenced by Agenda 2030 and the development of the SDGs and their adoption and practical pursuit by virtually every nation on earth.

As an extension of this commitment, and as an outcome of the Stockholm Conference, the General Assembly created a United Nations Environment Program (UNEP) which a few years later, in 1983, would establish what became the World Commission of Environment and Development (WCED). This explicit shift in primary focus from human/nature relationships to environment and development, reflected the final thrust of the Stockholm Declaration. Continued industrial development was regarded as inevitable as well as desirable while it was also the responsibility of every citizen of the world to protect the environment. The challenge was to bring together two domains that traditionally had been regarded as profoundly different from each other and best kept separate – the insights of the likes of George Herbert Marsh, Aldo Leopold, Rachel Carson, and the authors of the Limits to Growth notwithstanding.

Its publication was not uncontroversial.

#### **4. Sustainable development**

The WCED composed of a 'highly qualified and influential political and scientific team' was established in 1983 charged with generating what the UN General Assembly referred to as 'A Global Agenda for Change' (WCED, 1987). The brief contained four essential objectives with a primary task of 'proposing long-term environmental strategies for achieving sustainable development (SD) by the year 2000 and beyond'. Under the chairmanship of the Norwegian Prime Minister, Gro Harlem Brundtland, the team would spend some three years or so 'spanning the globe' and conducting an extraordinarily wider spectrum of consultations. The report of the findings of the Commission was subsequently presented to the General Assembly which, in a somewhat unusual move, then published and released the report for general

circulation in 1987 under the title of *Our Common Future*. Commonly referred to as the Brundtland Report, after the Commission's chairman, this publication led directly to the term passing into policy discourse at that time (Redclift, 2005). It has been claimed that the publication effectively marked 'a turning point in thinking on environment, development and governance' (Hedlund-de Witt, 2014) while presenting a fundamental strategy to guide the world to social and economic transformation (Shi, Yang & Gao, 2019). The focal point of the report lay with the description of sustainable development as 'development that meets the needs of the present without compromising the ability of future generations to meet their own needs' (WCED, 1987).

As time has progressed, sustainable development has become a topic of serious scholarly consideration that has spawned literally countless initiatives in research and education. Over the intervening years from 1987, a very extensive literature has been published, innumerable academic conferences held, and so many presentations made through open media, that the phrase has entered every-day speech. New academic hybrid disciplines have emerged that include ecological economics, environmental economics, sustainability science, and environmental ethics with each attempting to integrate different discourses of sustainable development. Scientific research in turn, has led some profound new insights related to man and nature as well as providing the foundations of development of a new generation of technologies.

As stated within *Our Common Future*, the spirit of the work of the Commission lay in an approach to development that aimed to 'promote harmony among human beings and between humanity and nature' (WCED, 1987). Regrettably, the definition of SD proffered in the Report fails to convey the essence of this spirit, privileging as it does, the process of development from an explicitly human-centred (anthropocentric) position. The marked shift from primary concerns about the relationships between humans and the rest of nature on the one hand to its exploitation for human purposes on the other, represents one area of the very significant and numerous criticisms that the basic idea of sustainable development has generated.

Perhaps surprisingly, given the stark (and relatively uninformative) simplicity of the description of sustainable development presented in the WCED report, the narrative itself was replete with observations about the innate complexities of the problematique, about the need to investigate systemic inter-relationships, and to include moral considerations in addition to the technical, instrumental ones. One small paragraph almost buried within the text on page 39, got to the very crux of the challenge.

In his brief submission at a Commission public hearing in Moscow in 1986, the Editor-in-Chief of the Communist Magazine, Ivan Frolov, stated that 'new methods of thinking, new ways of elaborating moral and value criteria, and new patterns of behaviour were all needed if global problems were to be solved'. Innovative social, moral, scientific, and ecological concepts needed to be developed to help in the determination of the 'new conditions for the life of mankind' today and into the future (Frolov 1986 cited in WCED Report, 1987). It was a tragedy that Frolov's call was not referred to in the Foreword to the report that Brundtland herself wrote. That would have very considerably enhanced the significance of *Our Common Future* as a plea for the development of new approaches to development that would integrate science with philosophy and the modern with the traditional and with the indigenous. It would have emphasised the fact that the adoption of the essence of sustainable development as the 'ethos' that it claimed to be, represented nothing less than the replacement of the dominant social paradigm of development with all its modern, industrial, mechanistic, trappings. As one scholar has submitted, 'it is very clear that the Brundtland concept of sustainability has been inadequate to deal with contemporary environmental problems because it missed the point that

sustainable development, in the strict sense of the word, ultimately rests on environmental ethics' (Choy, 2015).

The dominant socio-technical paradigm, which does not primarily reflect a moral imperative in support of sustainability, continues to prevail. This circumstance represents a critical loss of opportunity for the Academy to assume a major global responsibility for nurturing a climate of collaborative leadership within the context of critical engagement (Fear et al., 2006) through discourse within the context of paradigmatic transformation. What other institution has the social license or indeed the collective intellectual gravitas, to be critical of the prevailing culture of development in which it is embedded?

A comparison of data for a few key parameters between the time of the Stockholm Declaration in 1972 and the present day drawn from a number of sources, provide compelling evidence of the need for transformation. Over these years, the temperature of the planet has risen from 0.2°C above pre-industrial levels, to an astonishing 1.5°C with a concentration of CO<sub>2</sub> in the atmosphere rising from 327 ppm to 412 ppm over this period. Notably there are twice as many of us around today, as they were back in 1972 with the global population increasing from 3.8 billion to the current 8.1 billion. The number of vehicles on the road of the world has increased by a factor of six—from around 250 million to 1.5 billion. Most astounding of all, the gross domestic product of the world has increased nearly thirtyfold from 3.8 trillion to 104 trillion. Perhaps most poignantly, there are now more than a dozen individuals or families with wealth exceeding \$100 billion at a time when more than 700 million grossly impoverished people, live on less than \$2.15 a day.

## **5. Paradigms and worldviews**

It has been claimed that the source of 'environmental problems' lies fundamentally in the conventional values, beliefs and ideologies of the modernism and industrialism that are dominant as social paradigms in Western societies. Introduced as a concept in 1974 (Pirages & Ehrlich, 1974) the dominant social paradigm (DSP) describes the collection of norms, beliefs, values, habits and so on that characterise a culture. Dominance in this sense, however, is not a reflection of the numbers of those who collectively hold such beliefs and assumptions, but to the power structure of a society that legitimates and justifies particular institutions and practices (Cotgrove, 1982). Any actions carried on within the DSP are accepted as legitimate and supported by members of society at large as they require no further examination or critique (Kilbourne, Beckman & Thelen, 2002). It has been suggested that sustainable development has now achieved the status of the dominant social paradigms because it is so prevalent and pervasive throughout the discourse of the United Nations (Burns, 2012). The more general view however is that sustainable development remains grounded in the normal scientific and classical economic rationality that continues to characterise what can be referred to as international development. The prevailing paradigm in this context, continues to reflect the theories of modernisation, industrialisation and dependency that are typical of this modern industrial era (Escobar, 2000). The overarching goals of this socially dominant paradigm reflect an emphasis on the transformation of nations through economic growth achieved essentially through technological innovation and managerial efficiency (Escobar *ibid*). This dominant paradigm of modernisation, to which the Academy has led strong intellectual moral and methodological support, is based on an instrumental logic of productionism with its foundations in technical rationality and mechanistic reductionism (Norgaard, 1994).

So rather than being a new paradigm, sustainable development is essentially a modification of the development paradigm that has prevailed for so long. From this perspective, it is not difficult to support the contention that 'modernism has not only led us into interwoven

environmental, organisational and cultural aspects of the contemporary problematique, but it has ‘both prevented us from seeing and keeping us from addressing this constraining situation’ (Norgaard, 1994).

Paradigms are collective worldviews in action, as it were: practical expressions of the collective worldview assumptions and beliefs held by power elite, which have an extraordinary influence on the way each of us behaves as both citizen and consumer alike. Adding to the matter is that we each have our own idiosyncratic worldview beliefs and assumptions that reflect the way we make sense out of the world about us as individuals – how we ‘see’ our world and interpret the issues that it presents to us. This, in turn, has a fundamental influence on the nature of our actions. From this perspective, worldviews are ‘constitutive elements of sustainable development’ (Van Opstal & Hugé, 2012). Transformations of ‘ways of seeing’ would therefore seem to be a pre-requisite for changing how we do what we do. Koltko-Rivera (2004) presents worldviews as beliefs about (i) what ‘exists and what does not’ (ontological assumptions), (ii) ‘what objects or experiences are good or bad and what objectives and behaviours and relationships are desirable or understandable’ (axiological assumptions) and (iii) ‘what can be known as well as how it can be known’ (epistemological assumptions). It is important to recognise that these three different dimensions are closely integrated with each other and therefore effectively constitute ‘overarching systems of meaning and meaning-making’ that have a ‘profound influence on interpretation and co-creation of reality’ (Hedlund-de Witt, 2012).

The word ‘system’ here reflects the fact that each of these elements interacts with the others in ways that lead to ‘meaning’ as an emergent property of our ‘epistemic’ (knowing) systems with valuing, knowing and emotional, all mixed up together in a dynamic integrated whole. The relevance of worldviews in the present context is well captured by the submission that modern environmentalism (as an indicator of concerns about human/nature relationships) has evolved not just through an appreciation of the impacts of the industrial and social practices of humans on nature, but as expressions of ‘socio-cultural tensions related to underlying ontologies and epistemologies’ (Grove-White, 1996).

An intriguing and challenging aspect of our individual worldview profiles is that, once formed, through a process of development that seems to extend through our youth under significant influences of our experiences in, and interactions with the world about us, (Bawden, 2010) they become surprisingly intractable and resistant to challenges for change. Indeed, so firmly are they held, that to have them challenged is to evoke ‘deep emotional reactions’ as if personal beliefs about the very foundations of life are under threat (Hiebert, 2008). It is as if we each have a kind of ‘epistemic immunity’ that somehow impedes our capacities for the critical reflexivity that is fundamental, for example, to grasping the issue and threat of the self-destructive character of what has been associated with our modern industrial age (Beck, 1992). Indeed, we are so firmly in the grasp of our personal worldviews that we often ignore, or, worse, ‘deny the very existence’ of factors that manifestly threaten our own personal well-being - let alone the integrity of the biosphere. There is an almost universal lack of consciousness that we each even hold to particular worldview beliefs and assumptions let alone appreciate the impacts that it has on the way that we treat the world about us. Tragically, this epistemic ignorance is presenting further severe impediments to the transformation of the current critical state of people/planet relationships, which greatly extend the matter way beyond awareness through increased public and institutional knowledge.

## 6. Systems and systemics

Whether they were aware of the fact or not, the WCED authors who were writing *Our Common Future* were certainly reflecting, in their narrative, an intellectual, epistemic climate that was characterising the organisational development literature at that time. The emphases in their text on the complexity and systemic interrelatedness of the issues associated with sustainable development were consistent with the focus of the so-named systems approaches. And finally, the admission that the challenges of sustainable development were so multifaceted and unstructured they were better understood as a complex problematique was consistent with the unstructured systems of problems or ‘messes’ identified as the focus of systems approaches (Ackoff, 1974). While there were a number of different systems theories, principles, and practices being presented under that rubric at the time, all shared the same foundational belief that there are significant advantages in understanding through the exploration of complex situations from a holistic perspective (Jackson, 1992). The basic principle of this position is that whole entities (called systems) have unique properties that emerge through the interrelationships and interconnections of their embedded component parts (sub-systems) (Churchman, 1968). The whole, it is said, is different from any of its parts and the system approach seeks not the ‘big picture’, but ‘whole pictures’ of situations. Emergent properties are, by definition, not evident in any of those parts studied in isolation through a reductionist analysis. Through the dynamics of their operations, systems impact upon their environments while the opposite is also true: as a function of their own structures and organisational dynamics, environmental suprasystems can profoundly influence the systems embedded within them. Systems thinking is a process of making meaning using these principles as a conceptual framework while systems practice is putting the outcomes of this thinking to practical use. To intervene into any one set of relationships, intentionally or otherwise, will, almost inevitably, lead to changes elsewhere in this subsystem-system-suprasystem complex (Midgley, 2000). On this view, issues like climate change, biodiversity loss, persistent poverty and hunger, and displaced persons, are all clear candidates for investigation through an approach that integrates thinking and valuing into practice in a way that appreciates the complexity and dynamics of these three intensely inter-connected systems of systems (Ison, 2010). Annick Hedlund-de Witt has emphasised the inter-relationships that exist between worldviews as systems of meaning-making and interventions in social and natural ecosystems in pursuit of insights that will inform strategies focussed on improvements in complex situations (Hedlund-de Witt, 2012). From this position, transformative achievements of sustainable development in the material and social systems in the world are significantly dependant on transformations of the meaning-making systems of individuals and social collectives alike. This co-dependency has been described as systemic development (Bawden, 2005).

The adoption of systems approaches to the issues of sustainable development is still not widespread, in part because their epistemic foundations are entirely counter to those of the dominant social paradigm of modernism which privileges reductionism over holism. But other factors also contribute to the relative infrequency of systems practice as an approach to sustainable development. To think and act from a systemic perspective demands intellectual and moral commitments that transcend the typical mechanistic worldview beliefs and assumptions that Western education continues to promote. As has already been discussed, each of us tends to strongly resist changes to our own idiosyncratic worldview beliefs and assumptions, even though paradoxically, we are usually unaware of what it is that we actually do believe about the nature of nature (ontology), the nature of human nature particularly with respect to values and the processes of valuing (axiology) and the nature of knowledge and the processes of ‘coming to know’.



The Academy must now pay as much attention to the transformation of worldviews and social paradigms as it has traditionally paid to its conventional functions in teaching and research, and it must do this through adopting the spirit both of collaboration and of leadership as complex moral relationships.

## 7. An emerging initiative

The authors of this present article are involved in some early endeavours to explore collaborative leadership from the perspective of *leadership by universities* within the context of worldview and paradigmatic transformations in two nations that differ profoundly across a wide spectrum of geographic, economic, social, and cultural characteristics. These differences present very significant opportunities to explore both the cross-cultural challenges and the opportunities for the development of collaborative leadership by universities where the planetary existential crises are literally universal.

Initial contacts between our institutions were established in June 2021 through a short course on university leadership for senior administrators and academic leaders of PNG universities funded by the Australian Awards PNG (AAPNG). The course, which was designed and conducted by the Centre for International Development, Social Entrepreneurship and Leadership (CIDSEL) at the University of the Sunshine Coast in Australia was offered virtually (via Zoom connections) because of COVID restrictions on international travel. Particular emphasis was placed on experiential exposure to (i) systems thinking and practice, (ii) futures thinking and scenario practice, and (iii) a theory of change approach to strategic development and university leadership that integrated these two relatively novel ways of ‘seeing the world’ and of ‘acting within it’ in ways that explicitly expressed worldview and paradigmatic beliefs and assumptions.

These issues were further developed during another set of workshops conducted within a second short course on academic leadership in March 2023 again sponsored by AAPNG that also involved participants from a number of PNG universities. This event was conducted ‘face-to-face’ at the Sunshine Coast University and was followed up by a post-course symposium in Port Moresby in May of that year. At that event, a series of conversations between we two authors, along with several other senior members of the Western Pacific University, began a specific relationship between that university and the UniSC in a manner that reflects the character of collaborative leadership with strategic development as a context. In the course of those discussions and a number which have followed, both virtually and face-to-face, it has been recognised that further joint initiatives should include a focus on the development of collaborative leadership competencies themselves. These endeavours would involve the development of critical, cultural discourse and engagement of as wide a spectrum of stakeholders as practicable both within the institutions themselves as well as with those beyond their respective campus boundaries. The goal of these activities would be to explore ways through which collaborative leadership could be developed in ways that contribute to transformative approaches to the complex pressing issues of the day.

## 8. Conclusions

With the universities of the world facing so many challenges of their own in these volatile and complex times, it would seem somewhat futile to mount the argument that they must assume, or at least greatly reinforce, collaborative leadership on a global scale. And yet, as indicated above, the need is both critical and urgent. The Academy must accept a central responsibility

for facilitating the development and adoption of a new approach to development that returns the focus to improvements to nature/culture inter-relationships.

The sustainable goals are assuredly honourable and defensible, but they remain set within the dominant social paradigm that is failing to focus on these essential relationships. Furthermore, they fail to explicitly acknowledge the significance that the transgressions of the planetary boundaries represent as severe impediments to the achievements of any of these goals. The consequences are proving to be dire. The issues are immensely complex and systemic, as indeed was appreciated and emphasised throughout *Our Common Future*. Despite some claims to the contrary, there are few indications that the commitment to sustainable development as characterised by the 'definition' proffered in the Brundtland report, represents a genuine paradigmatic transformation.

Perhaps the greatest disappointment of the WCED report was not the lack of conceptual rigour or the imprecisions and ambiguities that were implicit in the different iconic symbols that claimed to represent the three 'intersecting' domains of the social, the economic, and the environment. Nor was it even the shift from concerns about human/nature interrelationships to nature as an economic resource base for social well-being, for very considerable progress in human well-being has been achieved over the intervening years. In spite of these profoundly important improvements however, the existential crisis that we face with respect to the way we are disturbing planetary structures and dynamic functions, continues to worsen.

The most significant omission of the WCED Report was Brundtland's failure to highlight Ivan Frolov's short contribution in her Foreword. It was not the changes in attitudes and behaviours that she privileged in her plea for collaboration but Frolov's call for 'new methods of thinking, new ways of elaborating moral and value criteria, and new patterns of behaviour' that were needed. This was a genuine call for developing different ways of 'seeing' and 'valuing' the world about us in all of its systemic complexity, as essential pre-conditions for developing different ways of doing things in (as well as to) that world. It is perhaps unfair to criticise Brundtland in this regard as the findings and recommendations that were generated from the work of the Commission, were presented as a technical instrumental report to the General Assembly of the United Nations, as was entirely appropriate. The decision of that body to then release the document into general circulation, was also admirable. Significant blame can, however, be apportioned to the Academy. Opportunities were missed. The release of *Our Common Future* presented an opportunity for universities to respond to the paradigmatic challenge through critical discourse and collaborative leadership. While that response still lies relatively dormant, there are institutions across the globe that are engaging with these issues in innovative ways.

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