

Sustainable development in Canadian context: a critical review

Desenvolvimento sustentável no contexto canadense: uma revisão crítica

Taylor Alexander^{*}
Maria Inês Paes Ferreira^{**}
Don Alexander^{***}

Abstract

Despite increased demand for sustainable development in Canada and around the world, the efforts to change unsustainable growth frameworks have been piecemeal and wholly ineffective. Neoliberal capitalism and economy-first philosophies supersede efforts at addressing the root causes of climate change and minimal sustainable development strategies. Beginning with Scott Campbell's "Planner's Triangle", effective policies and tactics can be implemented to challenge contemporary development and establish a broader framework that informs planners concerned with sustainable development.

Key-words: Sustainable development. Canadian policy. Planning. Sustainability promotion. Planner's Triangle.

Resumo

Apesar do debate crescente associado ao desenvolvimento sustentável no Canadá e no mundo, os esforços para transformar o modelo de crescimento insustentável vigente vêm se mostrando fragmentados e ineficazes. O capitalismo neoliberal e a conseqüente prevalência da lógica econômica sobrepõem os esforços para resolver as causas antrópicas associadas às mudanças climáticas. À luz do "triângulo do planejamento", proposto por Scott Campbell, e da Teoria da Panarquia, a presente revisão aponta para a socialização de informações e a gestão adaptativa como estratégias eficazes para desafiar o modelo de desenvolvimento contemporâneo e embasar os planejadores preocupados com a sustentabilidade.

Palavras-chave: Desenvolvimento sustentável. Política canadense. Planejamento Promoção da sustentabilidade. Triângulo do planejamento.

^{*} Bacharel em Geografia (VIU/Vancouver Island University), *campus* Nanaimo da Vancouver Island University - Nanaimo, British Columbia, Canadá. Assistente de Pesquisa (Programa de Planejamento Comunitário (Vancouver Island University - VIU), *campus* Nanaimo, Nanaimo, British Columbia - Canadá. E-mail: mrtayloralexander@gmail.com.

^{**} Pós-doutora em Gestão Integrada de Recursos Naturais (Instituto de Pesquisa da Reserva da Biosfera Mount Arrowsmith, Vancouver Island University - VIU), *campus* Nanaimo, Nanaimo, British Columbia - Canadá. Coordenadora do Núcleo de Pesquisa em Petróleo Energia e Recursos Naturais (Instituto Federal Fluminense -IFFluminense), *campus* Macaé, Macaé, Rio de Janeiro - Brasil). E-mail: ines_paes@yahoo.com.br.

^{***} Doutor em Planejamento Regional e Desenvolvimento (Universidade de Waterloo), Waterloo, Ontário - Canadá. Pesquisador e Docente do Programa de Mestrado em Planejamento Comunitário (VIU - Vancouver Island University), *campus* Nanaimo. E-mail: don.alexander@viu.ca.

Introduction

Human activity on earth has relatively expanded as time has progressed without much question or concern. Until recent globalization, hardly any thought was granted to the idea that humanity's incremental and minute actions could somehow amount to a crisis in global magnitude of endemic proportions (GROVE, 2002). Industrialization initiated the steep rise for beneficiary human prosperity and pro-economic ideology. Exponential anthropogenic activity impacted our world in largely imperceptible ways until the modern age. Fossil fuel economies barreled humanity quickly into a world of innovation, an inventive paradise. Consumption of largely petroleum-based production dominates hallmarks of prosperity in contemporary civilization (HALKOS; TZEREMES, 2011). People's lives are saved, made easier and more efficient due to industrialization; however, humanity's growth has a dirty little secret. Just as a deleterious virus in a human's body is fought with raised core temperature, so too does Earth cleanse itself of unwanted activity (LOVELOCK, 2005). After recently surpassing global pre-industrial temperatures of one degree Celsius, human endeavor has accounted for a plethora of negative impacts on Earth's climate (HANSEN et al., 2006). Without a concerted effort by planners and decision-makers, problems will continue to intensify and result in catastrophic effects for all life on the planet.

Sustainable development might be regarded as a reaction to the unhealthy imbalance in global contemporary modes of production and consumption. Some advocate that this concept seeks to provide an innovative vehicle that enables positive, equitable growth within social, economic and environmental frameworks (TOLBA, 2014). Unfortunately, human activity has become largely dependent on unsustainable forms of development and the transition to post-fossil fuel economies will not be easy. Similar to other highly developed countries, Canada has a strong, social, political and economic structure that make required fundamental changes arduous and complex. The rise in affluence of a country strongly correlates with worsening greenhouse gas emissions; however, countries of similar wealth have varying degrees of environmental performance. Such results lead "experts to conclude that policy choices, not economic wealth, are the key factor in determining a nation's environmental performance" (BOYD, 2003, p. 214). In this paper, we shall survey the precedents in Canadian sustainable development and explore the conflicts and opportunities in planning theory.

Methodology

The critiques presented herein were synthesized from document research. Investigation on the legal and official environmental framework linked to sustainable policies was made. Authors also researched academic literature on sustainable development, sustainability and sustainable practices applied to environmental management and planning processes.

Discussion

Fundamental dilemmas of sustainable development: the planner's triangle

Scott Campbell's "Planner's Triangle" (2012) provides a complete approach to considering the fundamental dilemmas of sustainable development. Planners are situated somewhere in the triangle with the elusive ideal of sustainability occupying the space in the middle.

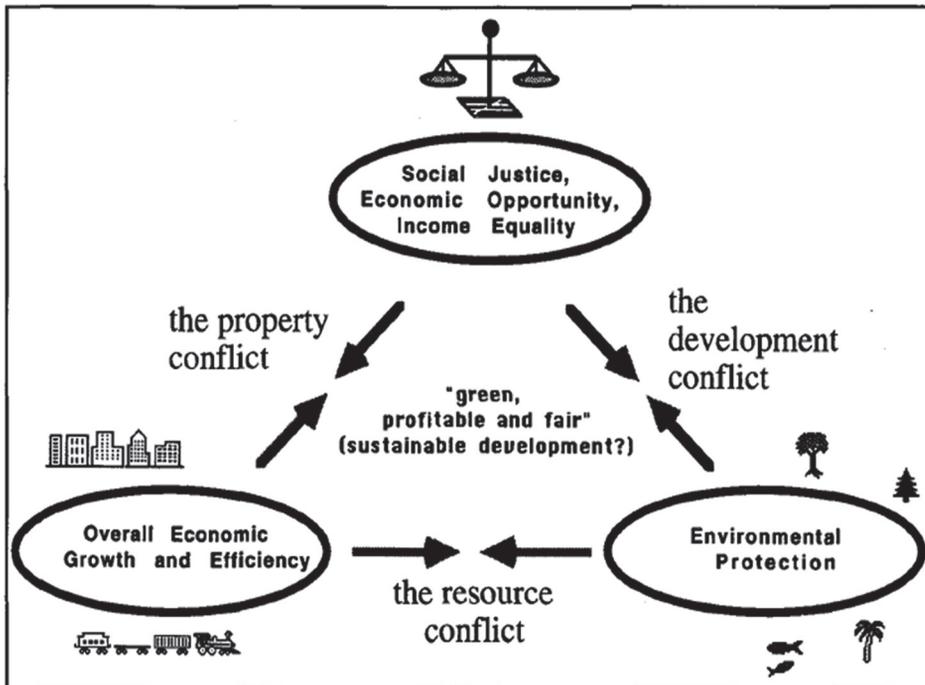


Figure 1. *The Planner's Triangle*
 Source: Campbell (2012, p. 415)

The diagram illustrates the conflicts of economic, environmental and social considerations for a 'just' and 'green' growth (CAMPBELL, 2012, p. 415). "In an ideal world, planners would strive to achieve a balance of all three goals. In practice, however, professional and fiscal constraints drastically limit the leeway of most planners [...] Where each planner stands in the triangle... defines such professional bias" (HOWE, 1990, p. 145).

Defining Sustainable Development

The term 'sustainable development' came to the forefront of global discourse in 1987 through the World Commission on Environment and Development's (WCED) Brundtland Commission report, "Our Common Future". The melding of two sides of the Planner's Triangle between economic development and sustaining environment were posited as an optimistic

collaboration. The WCED report outlines the need for continued quantity of growth while incrementally changing the quality of growth toward sustainability (WCED, 1987, p. 43-66).

Campbell (2012) contends that sustainable development has to be a conflict to balance the three issues equitably. Planners must choose “to remain outside the conflict and act as mediators, or jump into the fray and promote their own visions of ecological-economic development, sustainable or otherwise” (p. 434). For this reason, sustainable development was a passive choice and early attempts to implement this ‘optimistic collaboration’ were fraught with inaction. However, the concept of sustainable development is a noble endeavour because it provides a platform to focus the interconnected concerns of environmental, social and economic conditions. It is a useful conduit for “community-based thinking that indicates we need to integrate environmental, social and economic issues in a long-term perspective” (ROBINSON, 2004, p. 381).

Sustainable development discourse has stimulated a fundamental shift in the ways policies are viewed in the context of increased environmental awareness. Robinson correctly praises sustainable development when practiced with expansive perspective but this also requires a working principle. Owens (1993) measures the successes and failures of developing sustainably. She argues that social capital cannot be substituted for failing environmental assets. The process planner’s balance natural capital in separate groups implies “that certain environmental assets contributing to the quality of life might be defined as critical” in favour of other equally important ecological considerations (iii). In other words, environmental consideration is incorrectly applied to certain areas, such as recycling and garbage collection, and less in others, such as net greenhouse gas emissions. The perspective of managing natural capital requires an ever larger scope.

Granted, sustainable development has made significant inroads to opening the scope of consideration in favorable natural capital policy development. However, limitations exist in the ways we consider our humanity in the natural environment. Land-use planning and development has been slow to react to operational objectives required to become truly sustainable. Planners are tasked with considering “how the relevant environmental (often established at national or international level) policies relate to the use and development of land, and to assess the contribution of land-use planning measures” (iv). Operational principles require more robust environmental consideration that create win-win results through positive incentives. While human beings are naturally disinclined to contribute to positive eco-centric solutions (WALSH, 2013), furthermore, there curiously emerges a movement of self-proclaimed progressive change that is more aesthetic than effective.

Due to the polysemy of the expression, academic literature exhaustively debates about the inherent contradiction associated to sustainable development conceptual basis. Global capital neoliberal practices are so closely dependent on unsustainable production and consumption patterns, that some authors advocate that including sustainable development in global political agenda is nothing more than an ideological operation, designed to convince public opinion that conciliation of socio-environmental and economic welfare would be somehow possible (REDCLIFT, 2005).

On the other hand, Daly (1995) states that complementary brings the need for keeping natural capital stocks intact, and despite the critiques, “sustainable development as a concept is

indispensable”. Thus, aware of theoretical limits of the expression, similarly to Godschalk (2004), we recognize the importance of broadening the scope of planning processes and incorporate sustainability debate into the stage. Actual actions towards strong sustainability (DALY, 1995; ALLIER, 2002) can be regarded as steps to intergenerational environmental justice (VAN KERKHOFF; LEBEL, 2006; ANGUELOVSKI; ALLIER, 2014).

Neoliberalism and the “passive revolution”

Gibson (1991) surmises that sustainable development is a concept that could potentially attract hypocritical initiatives. It is a concept best described by Wanner (2015) as a ‘passive revolution.’ Sustainable development planners are confronted with a world where “transnational and international institutions operating under neoliberal economic regimes have little regard for the specificities of places or the communities that inhabit them and cannot and will not generate sustainable local economies” (BANERJEE, 2003, p. 174). For at least two decades, Canadian federal and provincial governments have established a precedent of allowing market forces to develop at the expense of social justice and ecological health. Pervasive neoliberalism continues to contribute to decreased levels of government intervention in hopes that local communities and municipalities will shoulder the cost of sustainable development (DROLET, 2012, p. 633). This economy-first ethos is entrenched in Western planning, which negatively influences and complicate the transition toward sustainable development.

Scholars agree that establishing sustainable development in current capitalist societies will result in impacts to ecological and social systems in varying forms (LIPPERT, 2004, p. 3-4; SPEHR, 1997; LOSKE; BLEICHWITZ, 1996). It is argued that sustainable development is deeply influenced by neoliberal capitalism and is in fact a ‘passive revolution’ that serves to entrench these hegemonic interests. This principal economic structure commodifies and privatizes ‘natural capital’ and increases growth in capitalist society through subjugating environmental and social concerns. Sustainable development is ultimately about the sustainable development of capitalist profits (WANNER, 2015, p. 23-24; LIODAKIS, 2010, p. 2602). The established and ever increasing “power and scope of transnational corporations are capable of exceeding the power of nations [and] the capabilities of the Canadian state in implementing policy directives are increasingly at risk” (HESSING; HOWLETT; SUMMERVILLE, 2005, p. 275).

Contemporary societal constraints

Current neoclassical capitalist modes of production contrasts sustainability reform and with seeking to maximize profit with impacts that accelerate depletion of natural resources. The unsustainable, fragmented and individualistic socio-economic structure influences “prevailing social relations and the scale of production, as well as relations of distribution and property regimes” (LIODAKIS, 2010, p. 2609). Recent globalization has accelerated exponential

privatization and commodification of ecological capital that attributes to its increased degradation. The political economy, while directly opposed to sustainable development, is structured in a way to enhance continuity of pro-industrial interests. And thus, Liodakis (2010) argues, radical transformation must be realized “through a revolutionary overturn of the fetishized ‘inverted world’ of capitalism” (LIODAKIS, 2010, p. 2614). Despite all criticism and the polysemy of the expression, sustainable development requires an astonishingly transformative and radically new approach to implementation.

Haberl et al. (2011) postulate that there are three modes countries interact with socio-ecological consumption and how societies transition between these ‘stages’. The ‘socio-metabolic regimes’ are “hunter-gatherers, agrarian societies and industrial society” (HABERL et al., 2001, p. 1). To reach sustainability, the industrialized regime is arguably equally distanced from reaching sustainable development as the agrarian society is to industrial society. This is problematic because two thirds of the world’s socio-metabolic regimes are transitioning from agrarian to industrialized. If there is to be a successful sustainable future, “a fundamental re-orientation of society and the economy, not the implementation of some technical fixes” is required. Current heavily polluting agrarian-industrial and industrial-sustainable socio-metabolic regimes in transition require the establishment of a new ‘eco-efficiency’ that necessitates deep societal and economic changes (HABERL et al., 2001, p. 11).

| 12 | *Canada’s sustainable development: policy conflicts*

Many governments, including Canada, adopt strategies and policies that promote localized action for climate change and disaster resilience. Community resilience is a measure of a locality’s ability to mitigate damage to public security and infrastructure (DROLET, 2012, p. 633; COLTEN; KATES; LASKA, 2008, p. 38). However, this approach does little to change the economy-first paradigm and lacks long-term action to an increasingly powerful problem. Tangible change will only be achieved through assessing weaknesses in the Planner’s Triangle that inform national decision-making. A vital aspect of sustainable development must be to “understand the root causes of environmental degradation so that laws and policies can target these root causes rather than merely treat their symptoms” (BOYD, 2003, p. 211). Canada is missing vital systematic mechanisms to attain sustainable development. For example, environmental laws are largely reactive as opposed to remedying the root causes; “existing laws are plagued with excessive discretion; laws and policies fail to reflect contemporary scientific knowledge; implementation and enforcement are undermined by inadequate resources [and] the public lacks opportunities for meaningful engagement” (BOYD, 2003, p. 212). This is important for understanding Canada’s dismal environmental record despite the fact that “50 percent of Canadians deems that climate change is a critical threat to the vital interests of the country” (DOMINGUEZ; VELAZQUEZ, 2013, p. 183).

While there are significant efforts to improve Canada’s environmental record, every

level – federal, provincial, municipal, corporate, community and individual – has overall done little to improve the country’s overall poor performance. The conflicts between environmental concerns and economic growth are staggeringly in favour of a predisposition toward the latter. David Boyd (2003) argues, “Short-term economic considerations such as profits, competitiveness, and jobs are the main reasons that Canada is missing key environmental laws, that existing laws are flawed, and that laws are neither implemented nor enforced to the extent required to ensure environmental protection” (BOYD, 2003, p. 251). In recent Canadian history, the federal government concentrated on job creation, national debt reduction and national unity. The concerted effort by federal decision-makers was resoundingly economic, which “resulted in major cuts to federal environmental science and regulatory capacity, a reluctance to challenge industry on environmental issues, and a desire to devolve as much activity to the provinces as possible” (JUILLET; TONER, 1997, p. 194).

The subjugation of environment for economic gain is Canada’s main conflict in Campbell’s “Planner’s Triangle”. The process of growth in Canada has uniformly concentrated on natural resource products (COATES, 2013). It will not be an easy task to reverse centuries of investment in exporting our natural resource commodities – of which Canada exported 80% to the United States in 2001 and 71% in 2014 (HOBERG, 2001, p. 173; ENVIRONMENT CANADA, 2014). Canada’s environmental concerns will greatly affect the close trade relationship we have with the US. To consider a shift toward sustainable growth, Canada will invariably come into conflict with trade interests that rely on its bountiful natural resources to stay competitive. However, the Organization for Economic Cooperation and Development (OECD) contends that Canada’s environmental compliance to regulation will have little effect on our market competitiveness with regards to natural resource exports (OECD, 1993, p. 7). Conversely, Canada’s lack of environmental regulations, compared to other international trade rivals, such as the US, can damage our market standing when falling short environmentally (BERNSTEIN; CASHORE, 2002). Conversely, The Trans-Pacific Partnership (TPP) has empowered private firms, domestic or foreign, with special privileges, “including the ability to challenge new policies - from Wall Street regulations to climate change protections - because they frustrated the corporations’ [sic] “expectations”” (PUBLIC CITIZEN, 2015). This trade agreement directly conflicts with decision-making that relates to environmental initiative within government.

When considering the stakeholders in the conflicts between environment and economy, “the entire public reaps benefits from environmental protection, but regulated corporations and individuals bear the costs” (BOYD, 2003, p. 253). This illuminates some of the most important aspects of the conflict. It defines the stakeholders who are set to gain and lose most with a shift in federal environmental regulation. In this private vs. public dialectic, Canada’s industries have far greater monetary resources than advocacy organizations. Furthermore, businesses control a large portion of the media and represent the majority of advertising expenditures (MARTIN, 1991; CAMERON, 2013).

Canada’s political system stifles the conflict’s resolution because industry contributes important campaign funding for Canadian politicians and indirectly benefits the public through job creation and tax revenues. Conversely, government subsidies to large-scale fossil fuel industry, such as

the oil sands, perpetuate this dependence. The majority of the \$34 billion in subsidies are uncollected taxes for some of the largest causes of emissions. The Canadian government and subsidy beneficiaries (provinces and oil sands workers) will not easily give up \$19 billion in potential revenue - money that could be used to improve infrastructure and promote a post-fossil fuel economy (ANDERSON, 2014). “As a result, the majority of environmental laws and regulations in Canada are produced by negotiations between government and business in which the latter tends to have the upper hand” (BOYD, 2003, p. 253). This is a clear issue in sustainable planning in Canada. The concentration on economic prosperity has established a system with powerful interests keen on sustaining the status quo. The solution to such an impasse needs to involve not just instituting environmental protection but changing the very core of our cultural and political structures. The expectation that economic growth will equal public prosperity is a fallacy (HENRIQUES, 2004).

Canada’s lack of an overarching national approach to this problem reduces sustainable development to piecemeal, incremental ineffectiveness. Canada’s Commissioner of the Environment and Sustainable Development surmised that governments have “failed to establish clear and measureable targets that are key to the success or failure of the sustainable development process... [And] many strategies appear to represent less a commitment to change in order to promote sustainable development than a restatement of the status quo” (SWANSON, 1993; BEDORE, 2008).

Canada’s sustainable development: improvements?

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Canada’s *Planning for a Sustainable Future* (CANADA, 2010) further typifies recent troubled efforts to establish institutional sustainable development. The report acknowledges challenges in implementing the concept, however, it fails to “clarify the nature of those challenges and the means through which they may be systematically and most effectively addressed” (FINDLAY et al., 2010, p. 77). The strategy fails to name “existing policies and objectives in other fields such as energy, natural resources, or even taxation [that] inhibit or perhaps preclude progress towards sustainability (Ibid., 78). Inversely, Findlay et al. (2010) conclude that proposals for integrated “pan-jurisdictional/institutional” decision-making, and expenditure planning shall better “ensure policy and program coherence” (Ibid.).

If Canada can establish a consolidated sustainable development and clear self-assessment, the strategy shall inform successful adaptive management. Adaptive management has been described as a valid approach to sustainability (NORTON, 2001). However, the reticence to explicitly identify key problems in current policies, goals and objectives does little to remedy the root causes of Canada’s sustainable development (FINDLAY et al., 2010, p. 85). Robinson (2004) surmises that a holistic approach is required to successfully institutionalize sustainable development. A “transdisciplinary” focus of the fields in the Planner’s Triangle involves understanding the connections “among the fields as much as on the contents of those fields.” Furthermore, Canada must develop “new concepts, methods and tools that are integrative and synthetic, not disciplinary and analytic; and that actively creates synergy, not just summation” (p. 378).

Canada's sustainable development: solutions and opportunities

To establish sustainable development in Canada there has to be a concerted effort to confront the policy shortcomings. Lippert (2004) succinctly outlines four prerequisites for Canadian environmental management that diminish predominant political and economic interests: “(i) complete information; (ii) knowledge about all (natural) ‘laws’ and immanent dynamics; (iii) the system has to be ruled by determinism, thus internal processes and the effects of external influences have to be calculable; and (iv) the system has to be scientifically analysable and manipulated.”

The Planner’s Triangle is again an excellent resource for reimagining the way forward. An integrated and holistic system that understands the interconnectedness of the three sides is paramount for tactically and efficiently incorporating sustainable development in Canada (and the world). Furthermore, the acknowledgement of external forces, whether for or against, must be included to inform effective decision-making. Valiante’s (2012) scholarship on Canadian policies for renewable energy furthers this strategy and outlines several benefits through this holistic approach (VALIANTE, 2012, p. 43):

An integrated and comprehensive strategy across the country could identify common goals respecting sustainable energy choices, innovation, job creation and energy security, reinforce linkages among them, and integrate implementation through agreement on optimal combinations of instruments. In addition, coordination could lower the costs of power infrastructure investment, increase diversity of supply and thus reliability, and enhance environmentally appropriate sitting decisions. (VALIANTE, 2012, p. 43).

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An active interconnected approach will involve national and international cooperation on an unprecedented scale. Programs, like Collective Intelligence Enhancement Labs (CIEL), Por (2014) surmises, will upgrade systems of community knowledge by connecting into a worldwide “collective intelligence”. Cooperation and connectedness shall “assist decision-makers and social movements in defining, mapping and addressing the [world’s problems]” (POR, 2014, p. 595). This is a global ecosystem of information that relies on adaptive cycles and multiple hierarchic scales to promote innovation and sustainability. As our economy globalizes, so too should our ideas and societal innovations. Laszlo (2014) contends that designing thriving will bridge the global gap to connect our sustainable efforts through collective intelligence. Programs of this magnitude will enable “new levels of community and fundamentally [advance] the narrative of our role as authors of the conscious evolution of our species” (LASZLO, 2014, p. 586).

Raymond et al. (2010) contend that challenges associated with knowledge integration and environmental management are inherently diverse. Results from the United Kingdom, Solomon Islands and Australia indicate there is “no single optimum approach for integrating local and scientific knowledge [...] These processes need to be systematic, reflexive and cyclic so that multiple views and methods are considered in relation to an environmental management problem” (RAYMOND et al., 2010, p. 1766). Collective intelligence is a progressive tool to disseminate information for global resilience, but requires a further theorizing of the way researchers and decision-makers collaborate and evaluate their integrated projects (RAYMOND et al., 2010, p. 1766; GADECEAU, 2014; PAN, 2010).

Panarchy

The theory of panarchy describes a system of learning that facilitates the fundamental transformations our institutions must make. Encompassing the holistic approach with sustainable development, system “management must build and maintain [for example] ecological resilience as well as the social flexibility needed to cope, innovate, and adapt” (HOLLING, 2001, p. 404). The power and development of communal knowledge will effectively inform individual, local, provincial and federal levels of decision-making. Through integrating levels for cooperation, “*adaptive comanagement* systems” enable “flexible community-based systems of resource management tailored to specific situations and supported by and working in collaboration with concerned governmental agencies, educational institutions, and [NGOs]” (OLSSON; FOLKE, 2001, p. 101).

The Planner’s Triangle concisely elucidates the fundamental interconnectedness that is desired in policies on sustainability. However, the complexity in the opportunities for sustainable collaboration between the three sides is far from linear. For example, the presumption that ecosystem users are linear and controllable is problematic. Conversely, “socio-ecological systems act as strongly coupled, complex and evolving integrated systems” (FOLKE et al., 2002, p. 437). Panarchy theory posits that these systems are adaptive cycles that loop into one another. To conceptualize sustainable development’s conflicts and opportunities, planners must utilize Holling’s (2001) integrated approach to manage these systems sustainably. Gunderson and Holling (2002) described four distinct phases of change in the structures and function of a system: growth or exploitation, conservation, release or creative destruction, and reorganization. Based on these, Davoudi (2012) proposed an integrated lemniscate scheme, where the first loop of the cycle relates to emergence, development and stabilization of systems’ structure and functions, while the second loop relates to their eventual rigidification and decline, and at the same time the opening up of new and unpredictable possibilities (Figure 2).

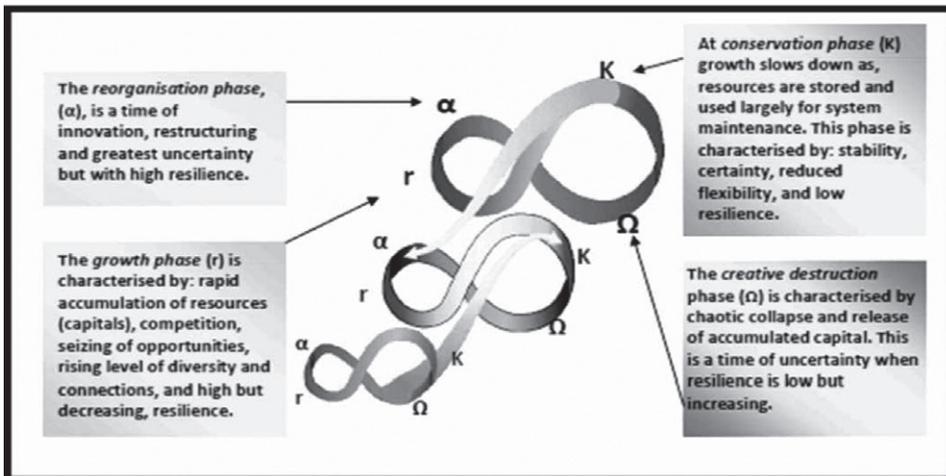


Figure 2. Distinct phases of change in the structures and function of a system

Source: Davoudi (2012, p. 303)

The fluidity and complexity of sustainable development is recognizable in panarchy theory because it identifies the “ubiquity of change, inherent uncertainties” and advocates the “exploration of the unknown and the search for transformation” (DAVOUDI, 2012, p. 304). Successful sustainable development requires a concept that “stimulate[s] interdisciplinary dialogues and collaborations” (Ibid, p. 306). The substantial complexity of transformation and co-management required to achieve true sustainable development necessitates radical departure from contemporary individualist structures. Panarchy encourages innovation and collaborative knowledge to succeed our current modes of action (NIEMELÄ, 2011).

Examples of such theories supporting this new epoch of humanity include collaborative governance regimes (CGRs). This decentralized, localized, collaborative approach to “structural arrangements, leadership, knowledge and learning, and resources” (EMERSON; GERLAK, 2014, p. 777) is connected through collective intelligence. Ambitiously, this theory in practice will essentially dissolve country’s borders and create a global eco-Marxist revolution for understanding the modes of production and sustainable development.

Conclusion

Canada has several major predominant modes of operation to reconcile tangible transformation to a sustainable socio-ecological metabolism. The economic predisposition of neoclassical capitalist structure is in direct opposition to nation-wide change. The multitude of interests threatened by this transformation mean that complex divergent systems will be slow to implement. The fragmented nature of private capital organizations are deeply entrenched in

political discourse and are poised to continue the exacerbation of conditions opposing sustainable transition. Furthermore, societal and economic institutions that grew in concert with unsustainable forces require fundamental reconfiguration. Such conclusions are acutely reflected in Canadian policy structures and implementation.

Years of federal decentralization contributed to incremental and piecemeal sustainable development in local and provincial government. Policy mandates acknowledge the basic nature of sustainability but neglects to confront glaring social, political, and economic obstacles. Planning theory scholars posit that collaborative, transformative and innovative approaches are required to reach sustainable socio-ecological metabolism. Holistic frameworks of information sharing, synthesis and positive implementation beckon tenets of Marxist theory through co-management and engagement. Panarchy theory is important for understanding integrated adaptive cycles to mainstream effective solutions to sustainable development.

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