



Sustainability: implications for career development

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Abstract

Sustainability, a focus of attention in many contexts including career development, is a systems problem. Systems thinking is essential to consider, and find solutions to, sustainability. Career development's responses to issues such as poverty, gender inequality, and environmental issues can be underpinned by social justice. This article considers the question "What are the implications of the sustainable development agenda for career development?" to enhance understanding of the UN Sustainable Development Goals (SDGs) and foster awareness of the relationship between career development and sustainability. Social justice and systems thinking are proposed as lenses for engaging with sustainability.

Keywords Sustainability · Career development · Social justice · Systems theory · Systems thinking

Résumé

La durabilité, un centre d'attention dans de nombreux contextes, y compris le développement de carrière, est un problème de systèmes. La pensée systémique est essentielle pour considérer et trouver des solutions à la durabilité. Les réponses du développement de carrière à des problèmes tels que la pauvreté, l'inégalité des sexes et les problèmes environnementaux peuvent être soutenues par la justice sociale. Cet article considère la question 'Quelles sont les implications de l'agenda du développement durable pour le développement de carrière?' 'pour améliorer la compréhension des Objectifs de Développement Durable (ODD) de l'ONU et favoriser la prise de conscience de la relation entre le développement de carrière et la durabilité. La justice sociale et la pensée systémique sont proposées comme des lentilles pour s'engager avec la durabilité.

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Resumen

La sostenibilidad, un foco de atención en muchos contextos incluyendo el desarrollo de carreras, es un problema de sistemas. El pensamiento sistémico es esencial para considerar y encontrar soluciones a la sostenibilidad. Las respuestas del desarrollo de carreras a problemas como la pobreza, la desigualdad de género y los problemas ambientales pueden estar respaldadas por la justicia social. Este artículo considera la pregunta “¿Cuáles son las implicaciones de la agenda de desarrollo sostenible para el desarrollo de carreras?” para mejorar la comprensión de los Objetivos de Desarrollo Sostenible (ODS) de la ONU y fomentar la conciencia de la relación entre el desarrollo de carreras y la sostenibilidad. Se proponen la justicia social y el pensamiento sistémico como lentes para interactuar con la sostenibilidad.

Zusammenfassung

Nachhaltigkeit, ein Fokus der Aufmerksamkeit in vielen Kontexten, einschließlich der Karriereentwicklung, ist ein Systemproblem. Systemdenken ist unerlässlich, um Nachhaltigkeit zu betrachten und Lösungen dafür zu finden. Die Reaktionen der Karriereentwicklung auf Probleme wie Armut, Geschlechterungleichheit und Umweltprobleme können durch soziale Gerechtigkeit untermauert werden. Dieser Artikel betrachtet die Frage ‘Welche Auswirkungen hat die Agenda für nachhaltige Entwicklung auf die Karriereentwicklung?’ um das Verständnis der UN-Ziele für nachhaltige Entwicklung (SDGs) zu verbessern und das Bewusstsein für die Beziehung zwischen Karriereentwicklung und Nachhaltigkeit zu fördern. Soziale Gerechtigkeit und Systemdenken werden als Linsen vorgeschlagen, um sich mit Nachhaltigkeit auseinanderzusetzen.

Global concerns about rising inequality and poverty in societies around the world, entrenched gender inequality, economic growth, and environmental issues related to climate change and resource depletion have become a focus of attention in the sustainable development agenda in many contemporary contexts. Sustainability is a complex systems problem on a global scale embedded in a complex web of inter-related systems (Sanneh, 2018). Complex systems problems such as sustainability are difficult to solve; systems thinking is essential to finding solutions to sustainability (Bartlett et al., 2020; Cyril, 2024; Lim et al., 2018; Palmberg et al., 2017; Sanneh, 2018; Voulvoulis et al., 2022). The United Nations (UN) has focused attention on, and called for action to address, sustainability through its 2030 Agenda for Sustainable Development (United Nations, 2015b). Governments around the world are responding to this agenda, as are large corporations, small- and medium-sized businesses, and individuals. Many disciplines, including career development, also are considering their contributions to sustainability.

Stimulated by the United Nations (UN) 2030 Agenda for Sustainable Development, career development researchers, theorists, and practitioners have been considering how to contribute to the achievement of the Agenda’s 17 Sustainable Development Goals (United Nations, 2015b; see Table 1), which are committed to the betterment of people, the planet, and prosperity for all by working in partnership

Table 1 Sustainable development goals

1. End poverty in all its forms everywhere
 2. End hunger, achieve food security and improved nutrition, and promote sustainable agriculture
 3. Ensure healthy lives and promote well-being for all at all ages
 4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all
 5. Achieve gender equality and empower all women and girls
 6. Ensure availability and sustainable management of water and sanitation for all
 7. Ensure access to affordable, reliable, sustainable, and modern energy for all
 8. Promote sustained, inclusive, and sustainable economic growth, full and productive employment, and decent work for all
 9. Build resilient infrastructure, promote inclusive and sustainable industrialization, and foster innovation
 10. Reduce inequality within and among countries
 11. Make cities and human settlements inclusive, safe, resilient and sustainable
 12. Ensure sustainable consumption and production patterns
 13. Take urgent action to combat climate change and its impacts
 14. Conserve and sustainably use the oceans, seas, and marine resources for sustainable development
 15. Protect, restore, and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss
 16. Promote peaceful and inclusive societies for sustainable development, provide access to justice for all, and build effective, accountable and inclusive institutions at all levels
 17. Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development (United Nations, 2015b, p. 23)
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and fostering peace (United Nations, 2015b). There has been discussion about the implications of sustainability in career development for many years (e.g., International Association for Educational & Vocational Guidance, 2022, 2023; Plant, 1999). Career theory, practice, and research responses are emerging and suggest career development's response can be conceptualized in different, yet highly relevant, ways. For example, the terms decent work (Blustein et al., 2016), green guidance (Plant, 2020a, 2020b), and sustainable careers (Van der Heijden et al., 2020) are increasingly evident in the career development literature and attention has been drawn to sustainability's relationship to the social justice values of career development (Plant, 2020b).

Given the diverse career development responses to sustainability, it is timely to consider and respond to the question, "What are the implications of the sustainable development agenda for career development?" The purpose of this conceptual article is to consider this question to enhance understanding of the UN Sustainable Development Goals and foster greater awareness of the systemic relationship between career development, social justice, systems thinking, and sustainability. Conceptual articles serve the dual purpose of integrating literature (Gilson & Goldberg, 2015) and contributing new perspectives to a field (Gilson & Goldberg, 2015; Jaakkola, 2020; Reese, 2023; Rocco et al., 2022). In general, conceptual articles begin by carrying out an overview of the domain under consideration (Gilson & Goldberg, 2015). This conceptual article first integrates literature related to sustainability, systems thinking, career development, and social justice. It subsequently

proposes social justice and systems thinking as essential lenses through which career development can consider its potential integration of sustainability into career development theory, practice, and research. Suggestions for practitioners and researchers are proposed. We begin by carrying out an overview of sustainability and the UN Sustainable Development Goals (SDGs).

Sustainability and the UN sustainable development goals (SDGs)

Although a focus of global attention in contemporary times, sustainability is not a new issue. In 1987, a widely used and commonly accepted definition of sustainability was adopted by the United Nations Brundtland Commission in the report *Our common future*; specifically, sustainability is “development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (United Nations World Commission on Environment & Development, 1987, p. 16).

So serious are the deeply systemic interconnected issues associated with sustainability that together they are widely regarded as a “global crisis” (Nota et al., 2020, p. v) that has been exacerbated by the coronavirus disease 2019 (COVID-19) pandemic. Sustainability demands a global response that has been offered in the form of commitment by many countries to the UN Sustainable Development Goals (SDGs; United Nations, 2015b; see Table 1). The ambition of the SDGs builds on the achievements of, and lessons learned from the earlier eight United Nations Millennium Development Goals (MDGs), which were agreed to in 2000 and concluded in 2015 (United Nations, 2015a). Implementation of the MDGs

helped to lift more than one billion people out of extreme poverty, to make inroads against hunger, to enable more girls to attend school than ever before and to protect our planet. They generated new and innovative partnerships, galvanized public opinion and showed the immense value of setting ambitious goals. By putting people and their immediate needs at the forefront, the MDGs reshaped decision-making in developed and developing countries alike (United Nations, 2015a, p. 3).

The achievements of the MDGs suggest the potential of the SDGs to make a real difference in the world. Progress in achieving the MDGs however, was uneven and inequalities persisted and it was recognized that the work was not complete and must continue. The then Secretary-General of the United Nations, Ban Ki-Moon, stated that “2015 is a milestone year. We will complete the Millennium Development Goals. We are forging a bold vision for sustainable development, including a set of sustainable development goals. And we are aiming for a new, universal climate agreement” (UN, 2015a, p. 75). The UN vision was:

to transform the world to better meet human needs and the requirements of economic transformation, while protecting the environment, ensuring peace and realizing human rights. At the core of this agenda is sustainable develop-

ment, which must become a living reality for every person on the planet (UN, 2015a, p. 9).

In 2015, the UN General Assembly adopted an action plan titled “Transforming our World, The UN 2030 Agenda for Sustainable Development.” This Agenda outlines five critical areas for the future of people and of the planet, specifically, people, planet, prosperity, peace, and partnership; 17 SDGs (see Table 1); and 169 targets with a view to ending poverty, fighting inequality and injustice, and tackling climate change. The goals and targets are concrete benchmarks toward achieving sustainable development. The SDGs “seek to realize the human rights of all and to achieve gender equality and the empowerment of all women and girls. They are integrated and indivisible and balance the three dimensions of sustainable development: the economic, social and environmental” (UN, 2015b, p. 5). Reflective of Plant’s (2020b) comment that “environmental issues and sustainability concerns know no boundaries” (p. 6), signatories to the agreement include 193 countries who have agreed to work toward achievement of the SDGs and report on their progress.

The SDGs provide a foundation for science, teaching, and research in diverse fields, including the social sciences, to contribute toward the amelioration of these global issues (United Nations, 2015b). Career development, with its foundation in social justice, is well positioned to contribute toward the achievement of the SDGs (see Table 1), several of which are clearly directly related to it (e.g., SDGs 3, 4, 5, 8). Indeed, the International Association for Educational and Vocational Guidance (IAEVG) in its 2022 and 2023 communiques, focused on the need for educational, vocational, and career guidance to consider its contribution to sustainability. The communiques claimed that career development has long paid attention to social issues and social justice and also needs to consider the ecological, planetary, and social foundations of sustainability and the impact of career decisions and career development on individuals, families, communities, and the larger society and environment (International Association for Educational & Vocational Guidance, 2022, 2023).

Sustainability is, in essence, a complex systems problem because of its multifaceted and interconnected nature; complex systems problems cannot be solved by simple, narrowly focused, or reductionist solutions (Cyril, 2024; Liu et al., 2015; Voulvoulis et al., 2022) or by siloed disciplines, although everyone and all disciplines can contribute toward the solution.

Sustainability and systems thinking

Sustainability is best understood through the principles of systems thinking; specifically, the world may be conceived as a complex system comprised of a multitude of interconnected human and environmental subsystems. The SDGs focus on the interconnections between the five key foci of people, the planet, and prosperity for all by working in partnership and fostering peace (United Nations, 2015b). The people focus relates to poverty and hunger reduction and the promotion of dignity and equality for everyone in a healthy environment. The planet focus relates to reducing

degradation of the environment though sustainable consumption, management of resources, and action on climate change. The prosperity focus relates to people living fulfilling lives and that social, economic, and technological progress harmonize with nature. The peace focus relates to peaceful, just, and inclusive societies where people live without fear and violence. The partnership focus relates to the need for global partnership and solidarity in which all countries, stakeholders, and people work to make the world a better place for all, particularly those who are poor and vulnerable. Change in one part of the system can result in direct and indirect impacts on other parts of the system (Lim et al., 2018). Progress related to one goal may bring about changes to other goals because of their interrelatedness in the broader system. For example, improvement in goal 4, inclusive and equitable quality education, could have an impact on goal 3 related to health and well-being, goal 5 related to gender equality, goal 1 related to poverty eradication, and goal 8 related to decent work. Equally, progress in other goals may have an impact goal 4. This highlights the systemic interrelatedness of the SDGs.

Systems thinking is a discipline for seeing whole systems and their parts that recognizes the patterns and interrelationships between the parts and the whole (Palmberg et al., 2017; Qudrat-Ullah, 2023); systems thinking “places equal emphasis on identifying and describing the interactions between objects in the system, as it does the objects themselves” (Lim et al., 2018). Indeed, systems thinking has been identified as a sustainability meta-competency that can be incorporated into curricula to enable learners to “to develop capacities to become agents for systemic change” (Bartlett et al., 2020, p. 71). At a very basic level, systems thinking may be understood by reflecting on a planet with finite resources that have enabled some people to prosper while others continue to struggle and the environment has been degraded. Systems thinking encourages reflection on the interrelationships and interaction between the various elements of the system (Qudrat-Ullah, 2023; Sanneh, 2018; Sexton, 2012); for example, what roles can governments, industry, and individuals play in working toward a reduction in inequality, global warming, and environmental degradation. Everyone has a role to play in achieving the SDGs, and their collaborations and contributions can create change for others and the planet; this is an example of systems thinking at work.

Systems thinking is an “essential lens” (Lim et al., 2018) and a “transformative tool” (Cyril, 2024, p. 2220) through which to approach the complex systems problem of sustainability for which a “singular focus on component parts provides an incomplete picture of complex problems and rarely leads to long-term solutions” (Lim et al., 2018); systems thinking and resultant systems approaches offer a multidimensional way of considering the many interacting components of the sustainability agenda (Cyril, 2024; Lim et al., 2018). Systems thinking has played a valuable role in advancing sustainability science in areas such as resilience, transition management, and disciplines such as social sciences, which are recognizing that “conventional disciplinary, reductionist, and compartmentalized approaches” (Liu et al., 2015) are insufficient for solving complex trans-disciplinary problems. By way of example, the interdisciplinary field of environmental psychology focuses on the “interplay between individuals and the built and natural environment” (Steg et al., 2019, p. 2) and in doing so, exemplifies the relevance of systems thinking.

Environmental psychology has adopted a broad conceptualization of sustainability that includes social, economic, and environmental aspects leading to claims that environmental psychology has evolved into a psychology of sustainability (Gifford, 2007; Steg et al., 2019).

In the transdisciplinary field of sustainability science, systems thinking brings together natural and applied sciences, social sciences, and humanities (Dincer & Rosen, 2013; Rosen, 2017a, 2017b). Related to sustainability science and systems thinking, Di Fabio and her colleagues (e.g., Di Fabio & Rosen, 2018; Di Fabio & Svicher, 2021) have proposed the introduction of a psychological perspective to sustainability science through the psychology of sustainability and sustainable development as a new research area. This new psychological perspective emphasizes the sustainable development of people by fostering their interpersonal and intrapersonal talents as well as the well-being of individuals and the environment, and individuals in “natural, personal, social, organizational, community, global and cross-cultural environments” (Di Fabio & Rosen, 2018, p. 2). Di Fabio and Svicher (2021) have considered the application of the psychology of sustainability and sustainable development to research and strategies to advance the decent work agenda, social justice policy, and organizations that value human dignity and equality, all of which are related to career development. Sustainability and the UN sustainable development goals (SDGs) have stimulated many disciplines, including career development, to think about how they can contribute to the future of people, the planet, prosperity, peace, and partnership, the five interconnected foci of the SDGs.

Sustainability, SDGs, social justice, and career development

Unfortunately, the 2022 Sustainable Development Goals Report revealed that achieving the Goals is in jeopardy and highlighted a reversal of sustained progress in poverty and hunger eradication and the improvement of health, education, and basic services (United Nations, 2022) due to the crises of COVID-19, climate change, and conflict. Concerted effort is needed to put the world back on track toward sustainability as the complex systemic interactions of COVID-19, climate change, and conflict have impacted all of the goals and created spin-off crises in food and nutrition, health, education, the environment, and peace and security (United Nations, 2022). It is in this context that career development’s relationship with sustainability, the SDGs, and social justice is considered.

The SDGs’ focus on people is fundamentally about social justice, a value held by career development. In particular, SDG goals 3, 4, 5, and 8 are clearly within the remit of career development and its commitment to social justice, although its potential contribution is much wider. Emanating in the social reform movement of the late 1800s and early 1900s, the goal of the early social reformers who were providing vocational guidance was to assist people to access better employment opportunities to have a better life. In their actions, these social reformers were demonstrating that “social justice is an articulation of what individuals, groups, and societies believe is morally and politically right” (Hooley et al., 2018, p. 4); consequently “ideas about what constitutes social justice differ” (Hooley et al., 2018, p. 4). Thus, in career

development “social justice is often loosely deployed or inadequately defined ... and tends to be absent in discussions of practice” (Irving, 2020, p. 2).

Despite this lack of clarity about its definition and practical application, social justice remains a core value of career development, although this has not always been evident, with critiques of career development citing its ongoing middle class focus as a concern (Patton & McMahon, 2021). In career development, social justice has been described as “a fundamental value” for supporting “personal growth and human potential” through “the distribution of resources in our society” (Arthur & Collins, 2014, p. 172). Socially just practice therefore, refers to actions that contribute “to the advancement of society and ... equal access to resources for the marginalized or less fortunate individuals in society” (O’Brien, 2001, p. 66). Not only should distribution of resources be equal, it should also be ecologically sustainable (Nota et al., 2020) and all people should be “physically and psychologically safe, acknowledged and respected” (Nota et al., 2020, p. 54). From a different perspective, Rice (2018), drawing on the work of political theorist Nancy Fraser, describes a socially just society as having “parity through participation,” not only in the workforce but also in “personal and social participation, and the capacity for all voices to inform public discourse” (p. 128).

Career development faces challenges operationalizing social justice in practice, primarily through its Western focus on individuals, its use of the term career as opposed to work or livelihood, concepts such as career choice and personal agency, and limited attention to the context and systems in which individuals live and their careers, work, and livelihoods are enacted. In terms of contemporary career theory, the psychology of working theory (Blustein, 2006; Blustein et al., 2019; Duffy et al., 2016) has reengaged with social justice, primarily through its advocacy of decent work for all citizens, the ideal of the International Labour Organization (ILO) reflected in the SDGs. Decent work, according to the ILO is:

work that is productive and delivers a fair income, security in the workplace and social protection for families, better prospects for personal development and social integration, freedom for people to express their concerns, organize and participate in the decisions that affect their lives and equality of opportunity and treatment for all women and men (International Labour Organization, 2019)

Despite the well-meaning intent of the decent work agenda that has been promoted globally, including in the SDGs, decent work is “an ideal that is becoming less possible for increasing numbers of working people across the globe” (Blustein et al., 2019, p. 156), a situation that has been worsened by the COVID-19 pandemic. Indeed, the focus on jobs and paid employment as evident in labor market statistics and career development has been criticized and the term “livelihood” (Arulmani et al., 2014a; Carr, 2019) has been suggested as a more inclusive term able to capture the realities of the insecure work situations of many millions of people such as unpaid work (e.g., domestic labor) and illegal work (e.g., slavery) (Carr, 2019; Carr et al., 2022); the reality for many millions of people is that their livelihoods are precarious (Standing, 2014) and not sustainable. Indeed, an interdependence exists between career development, social justice, and sustainability; “without increased

sustainability these will be no social justice” (Plant, 2020b, p. 4). Social justice and social injustice are themselves systemic in nature. The achievement of social justice involves not only individuals but also a range of other stakeholders such as communities and policymakers. Against this background, career development’s value of social justice provides a firm foundation for its potential contribution to sustainability and the SDGs. We now return to the question we posed in the title of this article to consider what the implications of the sustainable development agenda are for career development.

Career development’s engagement with sustainability

The relationship between career development and sustainability has been considered in the discipline of career development for more than two decades and is evidenced by conceptual, theoretical, practice, and research contributions. At a conceptual level, over 20 years ago, Plant (1999) suggested “career counselling should take into account and create awareness of the environmental impact of vocational choices” (Plant, 1999, p. 137) and has long advocated for the concept of green guidance to become a new paradigm for career work (e.g., Plant, 1999, 2014, 2020a, 2020b) because it applies a broad perspective to career decision-making that incorporates “personal commitment, societal involvement and meaningfulness” (Plant, 2020b, p. 6). It remains to be seen whether Plant’s (1999) predictions about the practices he described becoming mainstream will eventuate.

In 2014, in a section of the *Handbook of Career Development* (Arulmani et al., 2014b) titled “Making our careers green: Work, environmental sustainability, and social justice”, Arulmani et al. (2014a) reminded us that “the survival of our planet is directly linked to the manner in which we practise our careers” (p. 307); specifically, “career choices, individual as they may be, have implications beyond the individual, as they are linked to wider societal issues of social justice” (Plant, 2020b, p. 4). The terms sustainable careers, decent work, and green guidance are increasingly evident in the career literature. For example, a special issue of the *British Journal of Guidance and Counselling* focused on decent work, inclusion, and sustainability (Hughes et al., 2021), and the *International Journal for Educational and Vocational Guidance* featured a special section on life design interventions (counseling, guidance, education) for decent work and sustainable development (Chhabra et al., 2022), and a special issue of the *Journal of Vocational Behavior* was devoted to sustainable careers (Van der Heijden et al., 2020). The contemporary notion of sustainable careers, however, has been challenged. For example, Bal et al. (2021) critique the neoliberal ideology of contemporary understandings of sustainable careers that emphasize the role of individuals and organizations and propose as an alternative a collective dignity perspective that emphasizes the embeddedness of individuals in communities and the environment.

At a theoretical level, decent work, an important goal of the SDGs, has influenced the contemporary career theory and the psychology of working theory (Blustein, 2006; Blustein et al., 2019; Duffy et al., 2016), which is stimulating a body of research. The concept of decent work (Blustein et al., 2019) that is now pervasive in

the field reminds us of the social justice foundation and core value of career development. At a practice level, in 2020, Nota et al. published a book on sustainable development, career counseling, and career education in which they offer practitioners ideas for career interventions with young people on the basis of sustainability, inclusion, and social justice. Solberg et al. (2021) used the SDGs to design a program and intervention for high need, high opportunity youth that they subsequently researched. These examples evidence attention to career development's increasing consideration of sustainability and the SDGs as well as the potential contribution of career development toward the achievement of sustainability and the SDGs.

Although few would question the relevance of sustainability and the SDGs to career development, it is timely to consider what the implications of sustainability are for career development theory, research, and practice in the era of the 2030 agenda for sustainable development. The, to date, varied contributions to sustainability that have appeared in the literature evidence not only the relevance of the sustainable development agenda to career development, but also the stage that career development is in regarding its commitment and contribution to sustainability. While there has been much discussion in the career development field about sustainability, and many commentators and researchers exhort us to consider context, there has been little consideration of the conceptual and theoretical frameworks that might allow practitioners and researchers to take a holistic approach to integrating sustainability and career development.

Conceptual and theoretical engagement with sustainability

The existing contributions to the integration of sustainability and career development evidenced in the previous examples and the systemic nature of sustainability and the SDGs suggest that, at a fundamental level, career development needs to move away from its “mainly individualistic view of growth and of people’s realization, to a more markedly contextualistic view, focused on a representation of the future that involves a high attention focused on the ‘social’, on the common good and on sustainable development” (Nota et al., 2020, p. vi). In this regard, Guichard (2022) suggests that the question “What can I do to contribute with others to a collective life that is good and just?” (p. 583) could be considered in career guidance when working with clients.

Sustainability is best understood through the principles of systems thinking (Lim et al., 2018; Liu et al., 2015; Palmberg et al., 2017; Voulvoulis et al., 2022); specifically, the world may be conceived as a complex system composed of a multitude of interconnected human and environmental subsystems. Similarly, systems theory and systems thinking can provide a conceptual and theoretical foundation for the integration of sustainability and career development by taking the broad social and environmental context into consideration as well as career development's traditional focus on individuals. Such a foundation to date is limited in career development's attempts to integrate sustainability. Systems thinking is theoretically founded in, and an application of, systems theory (e.g., von Bertalanffy,

1968), and is critical to conceptualizing sustainability. Systems thinking can be taught and learned and is a valuable skill (Bartlett et al., 2020; Marcos-Sánchez et al., 2022; Palmberg et al., 2017).

There is a need for a conceptual approach to better understand how career development can engage with the issues and possibilities that sustainability presents.

Given the systemic nature of the sustainable development goals and the systemic nature of individuals, communities, and the environment, along with Lim et al.'s (2018) analysis of the need for a sustainable world as a systems problem, it would seem that a future vision of career development and its integration of sustainability could come from extant theories that acknowledge factors within the broad context within which career development occurs. For example, Parsons (1909), widely regarded as one of the founders of career development, has been described as a visionary with a reach beyond career development because he “advocated for a balanced, just, and peaceful society” (Plant, 2021, p. 53), a vision that bears some resemblance to advocating the integration of career development, social justice, and sustainability represented by the SDGs.

Super's (1990) life-span, lifespan theory was one of the first to incorporate the broader context into theory through the life-career rainbow and the segmental model of career development represented in his archway of career determinants. Super's segmental model or archway, in particular, incorporated a comprehensive range of factors that influence career development including a number of personal attributes and the traditional focus of career development, as well as the contextual factors of community, the economy, society, school, family, peer groups, labor market, social policy, and employment practices. Super (1990) emphasized the importance of understanding the interaction between the factors rather than which factor is most important, and in doing so, reflected systems thinking, although he did not actually mention systems or offer an explanation about how interaction between the career determinants occurred.

Despite repeated critique that career development theory and practice does not adequately take account of the broad systemic context (Patton & McMahon, 2021) in which individuals make their career decisions and transitions, some theories are better positioned than others in terms of their acknowledgement of context. For example, social cognitive career theory (Lent et al., 1994) incorporates a range of contextual factors in their model of career-related choice behavior (Lent et al., 1994) that could be used to explain and explore the implications of sustainability. The psychology of working theory (Blustein et al., 2019) considers key elements that are of importance to sustainability. Related to sustainability's foundation in complex and dynamic systems are three career theories founded in systems theory, in particular the living systems theory of vocational behavior and development (Vondracek et al., 2014), the chaos theory of careers (CTC; Pryor & Bright, 2011), and the meta-theoretical systems theory framework of career development (STF; McMahon & Patton, 1995; Patton & McMahon, 1999, 2006, 2021). All three acknowledge the multiplicity of factors influencing career development and the complex and dynamic nature of interaction between the influences, and both the CTC and STF recognize the role that chance events such as the COVID-19 pandemic can play.

Of these theoretical perspectives, the STF has advantages that make it suitable as a conceptual and theoretical framework that can connect career development and sustainability. First, it is represented by a complex, yet user-friendly, dynamic systems map of contextual influences on career development that apply to both sustainability and career development, e.g., people and the planet through its emphasis on the individual, social, and environmental–societal systems. Second, the STF map recognizes the complex recursive interaction within and between the systemic influences and chance, and differs from the other systems-theory-based career theories in that it is also specifically set in the context of past, present, and future time. Given the historically connected nature of sustainability specifically, the crises of the present have been brought about by human practices in the past and present and will impact future generations, and the STF potentially offers a central tenet for the integration of career development and sustainability. Third, a further strength of the STF in terms of sustainability is its meta-theoretical nature (Patton & McMahon, 2021), thereby allowing and encouraging multidisciplinary perspectives to be shared and collaborations to be forged. Fourth, importantly, the STF’s explicit focus on systems thinking and systems mapping are central to its application in practice and research and can be learned (Patton & McMahon, 2021).

The STF provides a useful foundation for developing five identified meta-competencies for sustainability, specifically, “system thinking, temporal thinking, interpersonal literacy, ethical literacy, and creativity/imagination” (Bartlett et al., 2020). Bartlett et al. (2020) suggest that training and professional development also employ an ethic of care as a foundation, specifically, an ethic of care for “self, others, environment/nature, and knowledge” (p. 72). The ethic of care advocated by Bartlett et al. (2020) essentially concerns being responsible for, and concerned about, the consequences of our action, systemic reflection on the impacts of our actions, and may be achieved through systems thinking. The STF offers a useful foundation with which to operationalize the multiple vectors of consideration about sustainability and the deep understanding needed to consider people’s careers. By deploying the systems theory framework as a conceptual framework for greater understanding of the relationship between career development, social justice, and sustainability, a clear link may be seen to exhortations to use systems thinking (Cyril, 2024; Lim et al., 2018; Liu et al., 2015; Palmberg et al., 2017; Sanneh, 2018; Voulvoulis et al., 2022).

Engagement with sustainability in practice and research

In addition to the need for a conceptual or theoretical framework that can underpin the integration of sustainability into career development, there is also a need to reconsider practice and the training and professional development of career practitioners so that they are not only familiar with sustainability and the SDGs, but also that they can facilitate learning about them in practices such as career counseling, career education, and career development programs. Practitioners need to be supported to develop the “disposition or capability to make change in the variety of institutions and communities they find themselves working and living in” (Bartlett

et al., 2020, p. 71), that is, to act as change agents in the systems in which they live and work. In considering career education interventions related to sustainability and decent work, Cohen-Scali (2018) concluded that to “build the society of tomorrow ... will require the implementation of individual as well as collective interventions focusing on creativity and collaboration” (p. 320). Given the close relationship between sustainability, social justice, and career development, practitioners may need to develop their social justice advocacy skills (Arthur et al., 2024). Advocacy “means giving voice to, and actively participating in, actions that are designed to address coaxial inequities and to promote social justice” (Arthur et al., 2024, p. 78). For example, career practitioners, either individually or collectively through professional networks, may be able to use their professional skills and knowledge to raise awareness of and address the social and systemic problems that adversely impact people.

An implication of integrating sustainability and the SDGs into career development is that methods of training that are facilitative of developing systems thinking and understanding and operationalizing social justice are required, and those providing training may need to rethink their modes of teaching and learning. For example, Hayden and Osborn (2020) demonstrated how experiential learning could be used to align practitioner training with career practitioner standards and competencies including those related to diverse populations, ethical practice, and “conceptualizing the interrelationships among and between work, mental well-being, relationships, and other life roles and factors” (p. 7). As reflected in this example, experiential learning, as well as place-based learning, may assist learners to develop systems thinking. In addition, practitioners and researchers can be encouraged to critically reflect on central concepts of career development (Guichard, 2022) and its interventions in the context of the SDGs. For example, Sultana (2022) drew attention to how critical reflection on the commonly used terms adaptability, resilience, vulnerability, and activation draws attention to their relationship with the neoliberal agenda. Bal et al. (2021) similarly critiqued the term sustainable careers and Arulmani has drawn attention to the Western and middle-class origins of concepts such as career and career development. A shift in focus in career practice from preparing people to design their work lives to designing lives that actively contribute to equitable and sustainable development has been advocated (Guichard, 2022; Pouyard & Guichard, 2018). Guichard (2022) in particular offers suggestions for moving from the individual focus in career guidance of life design to a focus on “acting for fair and sustainable development” (p. 581). Drawing on Arendt’s (1958) concept of active life, Guichard proposes three questions that could move career guidance to a greater focus on sustainability, specifically “How can I ensure my survival? (Living on); What working life could give me a good life? (Self-realization); What can I do to contribute to a collective life that is good and just? (Acting reasonably)” (p. 588). Guichard’s (2022) work represents one of the most concrete examples to date of a shift that could facilitate greater integration of sustainability into career development.

In terms of research, the application of systems thinking may result in new avenues of inquiry, new research questions to be asked, and greater use of multi-disciplinary teams. For example, engaging with research participants using soft

systems methodologies such as action research and participatory action research can be action oriented and useful for “framing and addressing problems” (Armstrong, 2019, p. 463). Such methodologies can include a range of stakeholders, including those who may be marginalized and do not otherwise have a voice (Rajagopalan & Midgley, 2015). For example, Blustein et al. (2020) proposed participatory action research as a method of engaging with families where a parent is unemployed to give them a voice and enable researchers to be proactive and inclusive. Research collaborations from diverse disciplines such as that advocated by Di Fabio and her colleagues (e.g., Di Fabio & Rosen, 2018; Di Fabio & Svicher, 2021) could bring different perspectives to research problems, the conduct of research, and possible solutions to problems.

Conclusions

In answer to the question “what are the implications of the sustainable development agenda for career development?” we draw on Plant’s (2021) suggestion that career development that integrates sustainability will be more relevant in “both societal and individual terms” (Plant, 2021, p. 57). However, we need to move beyond the excellent foundational work undertaken over the last decades to thinking through how career development theory, research, and practice can more comprehensively engage with issues of sustainability. In this article we have proposed social justice and systems thinking as lenses through which this engagement could be strengthened. In concluding this article, it is opportune to leave the final word to Peter Plant, a long-standing advocate for green guidance and the need for career development to play a role in addressing sustainability: “guidance must become part of the solution rather than the problem” (Plant, 2014, p. 314).

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Declarations

Conflict of interest On behalf of all authors, the corresponding author states that there is no conflict of interest.

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