Unpacking Key Terms: Sustainable Development, Indigenous Knowledges, Methodology

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Abstract This chapter aims to unpack through a relevant literature review the three key concepts this book, which is focused on Indigenous methodologies, research and practices for sustainable development, operates with. These key concepts include: sustainable development, Indigenous knowledges and methodology. While the chapter separates the explanation of these notions for analytical purposes, it also aims to bring the discussion of them together, highlighting intrinsic links amongst them, by putting forward the following argument. Although the coordination, or orchestration, of sustainable development by the United Nations to date has pitfalls, this organisation with its worldwide reach, has the power to coordinate the awareness raising and the dissemination of cutting-edge ideas about sustainable development which are interlinked with sustainable entrepreneurship. This can be done by appealing to knowledge as a major tool in this process. Researching and mobilising Indigenous knowledges in this process is a specific case that this chapter explores. Instead of integrating Indigenous knowledges with Western knowledges, which is what a range of prior studies suggest, this chapter demonstrates the need to decolonise Indigenous knowledges so they can occupy an active position in the global knowledge systems. Indigenous knowledges can be decolonised through emancipatory research that steps away from Western limiting approaches. Liberated Indigenous knowledges are presented in this chapter as a tool for a new sustainable development agenda informed by the idea of sustainable entrepreneurship.

Keywords Sustainable development · United Nations · SDGs · Indigenous knowledges · Western knowledges · Decoloniality · Indigenous research paradigm · Methodology

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1 Introduction

Sustainable development has moved to the forefront of international policy discussion, given the interconnected nature of all areas of life and significant problems in them that the world has been dealing with. This is encapsulated in the recent global project of the United Nations—the Sustainable Development Goals (SDGs, 2021). Its aim has been to mobilise global and local actors to solve the issues which undermine and threaten the wellbeing of the planet and its populations, particularly those who are marginalised. In pursuit of this aim, it is important to appeal to the available knowledge and further research for the production of knowledge to promote sustainable development (Annan-Diab & Molinari, 2017).

This chapter aims to explain the three key concepts this book operates with: sustainable development (SD), Indigenous knowledges (IKs) and methodology. The chapter is based on relevant literature review in these three areas, highlighting the links and gaps amongst them. While the chapter presents an analytic separation of these three concept in their explanation, it also aims to bring the discussion of them together, highlighting intrinsic links amongst them, by putting forward the following argument. Although United Nations' coordination of the progress towards SD in the world has pitfalls, this organisation does have potential to orchestrate the application in practice of the revised definition of SD which is related to sustainable entrepreneurship, put forward by Hummels and Argyrou (2021). This can be done by appealing to knowledge as a useful tool in this process. Researching and mobilising IKs in this process is a specific case this chapter explores. Rather than simply aiming to combine IKs with Western knowledges, which would not dismantle the colonised position of IKs, this chapter demonstrates the need to decolonise IKs by going beyond Western approaches in research into IKs. This is crucial in liberating IKs to enable them take, rather than be granted by colonisers, their equal position in the system where other knowledges exist. This is crucial also for SD, which has already been deemed as dependant on IKs as well as other forms of knowledge. Liberated IKs would also actively influence SD which is rooted in sustainable entrepreneurship which, in turn, should be seen as an international endeavour, integral not just to the Euro-North-American context but to the Global South as well.

The chapter unfolds as follows. The idea of SD is discussed first. In this effort, a review of the evolving nature of the meaning of the concept 'SD' is presented as well as the orchestration of SD by the United Nations which has become an integral feature of SD. The second part of the chapter explores the concept 'IKs'. This section will unpack relevant definitions and call attention to the fact that Indigenous peoples remain marginalised in different areas of life, despite the limitations of the existing international efforts to develop an inclusive global society. The need will be highlighted to continue researching IKs and ultimately enabling them to actively decolonise themselves. The final part of the chapter presents a literature review about the concept 'methodology', building on the discussion of the other two terms and fostering a discussion around the shortcomings of Western methodological approaches on IK research as well as fostering discussion about the need for IK

research to be informed by decoloniality as an overarching research vision, rather than Western standpoints. This section also outlines a few success stories in IK research after emphasising the shortcomings of a wide range of studies into IK that have not managed to move away from Western ways of doing research.

2 The Concept 'Sustainable Development'

The first part of the chapter will discuss the definition of the first of the three key concepts covered in this book—SD—and begin unpacking the main argument of this chapter by detailing the work of the soft governance of international policy through 'policy orchestration'. It has been emerging as a new powerful method of governing, first, the Millennium Development Goals (MDGs), and then the Sustainable Development Goals (SDGs), by the United Nations (UN) through the growth of 'orchestrated networks' (Viola, 2015: 24). The orchestration of SD in the UN projects to date will be problematised but, at the same time, the capacity of the UN to orchestrate the application of a revised definition of SD in practice will be proposed.

2.1 An Evolving *Definition of 'SD'*

According to Keiner (2005: 1), SD as an idea can be traced back to 1713 'when Carlowitz edited the first book on forest sciences', arguing timber would become as important for the humanity as daily food, and calling for caution in its usage. However, it was the UN that has been playing a pivotal role in the promotion of SD in the world for decades. The commission established by the UN General Assembly in 1983, which later adopted the name World Commission on Environment and Development (WCED) launched an investigation into the problems that the society faced globally in the 1980s (SDGs, 2021). This commission is also commonly referred to as the Brundtland Commission (Hummels & Argyrou, 2021). WCED provided an explanation that 'sustainable development is not a fixed state of harmony, but rather a process of change in which the exploitation of resources, the direction of investments, the orientation of technological development, and institutional change are made consistent with future as well as present needs' (WCED, 1987: 25). As any burgeoning idea, a precise definition of SD was yet to be developed but the urgency of putting SD at the forefront of policymaking was evident. For instance, it was presented as one of the most urgent subjects for international policy at the 1992 UN Earth Summit in Rio de Janeiro (Chichilnisky, 1997).

Despite international attention on all levels of policy-making, or perhaps better to say, because of the attempts of all these interested parties to identify and steer an SD agenda in their preferred direction, SD has been a contested concept. Parris and Kates (2003: 559) explain that the 'proponents of sustainable development differ in their emphases on what is to be sustained, what is to be developed, how to link

environment and development, and for how long a time'. These scholars illustrate this by listing twelve selected efforts to characterise and measure SD which include, for example, the Wellbeing Index, the Environmental Sustainability Index, etc. The multiplicity of these efforts has been coupled with changing ideas in development and environmentalist thinking (Elliott, 2012).

In addition to the changing context of SD, Hummels and Argyrou (2021: 2) blame the vagueness of WCED definition of SD, provided earlier, for the violation of 'planetary boundaries' in the recent decades, such as climate change, the scarcity of natural resources, social inequalities, threat of terrorism, etc. The authors debate the elusiveness of SD as a practice because of the unresolved contradiction among its components: economic growth, human development and environmental protection. This recent publication has successfully collated and analysed a range of definitions of SD and called for a revised definition that places sustainable entrepreneurship in the centre of SD. This new definition 'allows the pursuit of economic growth but requires compliance with the planetary boundaries. A potential way out of the tragedy is offered by sustainable entrepreneurship that promotes economic growth while intends to overcome sustainability related challenges through the creation and distribution of solutions' (Hummels & Argyrou, 2021: 1).

The authors of the revised definition of SD focus on an example of a particular company which demonstrates the applicability of the definition in practice. However, arguably, the UN with its orchestration power has the capacity to orchestrate awareness raising about this way of seeing SD in the world and to promote the adoption of sustainable entrepreneurship for SD.

2.2 UN's Orchestration of SD

The UN has been coordinating the improvement of life globally in different areas through its two related big projects: the MDGs which commenced in 2001 with the deadline in 2015, and the subsequent SDGs with the deadline in 2030. The MDGs and SDGs have been led by a set of goals, targets, and indicators. To give an idea of the scope of the projects, the current SDG project is accompanied by 17 goals with 169 targets and 230 indicators (Yap & Watene, 2019: 452). The aim of the interconnected projects has been to mobilise everyone to tackle the problems, which threaten the wellbeing of the planet and its peoples (SDG, 2021). Previous research in the area of MDGs and SDGs is diverse. Its foci include the international governance of the two projects (Biermann et al., 2017; Fukuda-Parr, 2014; Kanie and Biermann, 2017), the extent to which the SDG project became an improved version of the MDG project (Carant, 2017), and evaluating the achievements and challenges in the design and implementation of both sets of goals in national contexts (Assefa et al., 2017; Fukuda-Parr et al., 2013; Jacob, 2017).

The efforts in the formation and achievement of these goals have not been a complete success story. First of all, the MDGs were developed by Western countries and did not take a participatory approach (Ogujiuba & Jumare, 2012), unlike the

SDGs which sought input from governments, civil societies and individuals from the My World Survey (Gellers, 2016). However, despite the fact that the UN stepped up its effort in orchestrating a shared design of the SDGs, the SDGs have shortcomings in other respects. For example, some marginalised groups such as Indigenous peoples and women remain marginalised, even despite the universality and participatory nature of the SDGs (Winkler & Satterthwaite, 2017). There is also a lack of emphasis on higher education in the SDGs, without which the progress of developing countries is hindered (Heleta & Bagus, 2020). The emphasis on animal health, welfare and rights has been overlooked in the 17 SDGs, which helps Visseren-Hamakers (2020) make a case for calling for the creation of the 18th goal dedicated to this matter. The goals are meant to be comprehensive, interrelated and universal. However, the language is not strong enough, policies and funding provisions are not always clear, and the goals are still strongly embedded in the neoliberal framework and traditional economic growth (Assefa et al., 2017; Jacob, 2017).

These pitfalls in the design and implementation of the MDGs and the SDGs is not surprising as doing world-wide projects is far from being easy and straightforward. Despite these weaknesses of the process, the UN remains the world-encompassing leader in SD, exercising its soft governance while carrying on with the SDGs.

It is important to review how SDGs are governed on the international level to understand their essence better. Soft governance is the concept that, arguably, explains the management of different matters specifically on the international scale. It is so because of the participation of country representatives and various stakeholders in the main international governing establishments, such as the UN. Moreover, Fejes (2006: 224) argues that 'no longer is governing made through legislation. Instead it is made through different techniques/tactics'. Although soft power at the international scale has partially reduced the power of the states in directing their domestic matters (Grek, 2008), it is still too early to disregard the authority that the states have to steer the development of their domestic contexts, as well as to fully shape the international policy scale itself. Hudson (2011: 671) suggests that soft government may be 'as powerful as direct control mechanisms'.

Soft power is a broad notion. Different international organisations would govern their projects in different ways, all possibly being classified as soft governance. For instance, Abbott et al. (2016) distinguish orchestration from delegation, although they acknowledge that the distinction is made for analytical purposes as the two models overlap in practice. According to the scholars, delegation is based on the principal-target actor contractual relationship, whereas orchestration is based on orchestrator-intermediary-target actor relationship, which is more fluid. Orchestration through the three actors suggested by Abbott et al. (2016) has been turning into a much more complex issue in practice. It is because orchestration has been emerging as a new powerful method of governing through the growth of 'orchestrated networks' (Viola, 2015: 24). The author explains that these networks have one or more focal or nodal institutions that orchestrate—lead through facilitation. When they cannot engage in direct regulation, they rely on other public or private organisations that volunteer in this process and share a common goal, and in this way exert their indirect control that allows them to construct the world in which they operate.

Abbott and Bernstein (2015) and Bernstein (2017) scrutinise the actors involved in the orchestration of the SDGs. Abbott and Bernstein (2015) explain that the term 'orchestration' is a metaphor for the UN High-level Political Forum on Sustainable Development which is a subsidiary body of both the United Nations General Assembly and the United Nations Economic and Social Council which are responsible for sustainable development policy-making. This Forum became the 'platform through which the governments can promote the coordination and combination of policies to defuse and integrate the Sustainable Development Goals into global, country-level, and marketplace policies and practices' (Bernstein, 2017: 214). According to Weiss (2018: 1), 'The UN system was born plural and decentralised and was never intended to approximate a formal world government'. The UN system is composed of three elements: the First UN which is the UN institutional framework of member states, the Second UN which is the secretary-general and the international civil service that are independent from the member states, and the Third UN which is a range of NGOs, experts, corporate executives, media representatives as well as academics. These elements form an interconnected network that extends its cooperation with other institutions, particularly within members states. Thus, the UN works as 'the orchestrator of orchestrators' (Bernstein, 2017: 214). Since the policy actors in the UN orchestration network for SDGs are volunteers, the orchestrator cannot prescribe what do, and can only point to directions for work which results in both opportunities and challenges (Bernstein, 2017). Although orchestration is not discussed explicitly in relation to MDGs, it may as well have been the method of governing in that project too as polycentrism in SD during the MDG project is mentioned by Ostrom (2010).

Although the orchestration of SD in the UN projects to date has pitfalls, the UN evidently has the power to orchestrate so it can orchestrate the applicability of the revised definition of SD, put forward by Hummels and Argyrou (2021) by appealing to knowledge as a useful tool in this process. Researching and mobilising Indigenous knowledge in this process is a specific case this chapter explores, in the effort to bring the ideas about sustainable development, Indigenous knowledge and Indigenous methodologies together and highlight their interconnected nature.

3 The Concept 'Indigenous Knowledge'

This part of the chapter will place IKs in the spotlight which is the second of the three key concepts this chapter discusses in light of the available scholarship. This section will unpack the relevant definition and call attention to the fact that Indigenous peoples remain marginalised in different areas of life. The discussion below will demonstrate the need to recognise the importance of IKs for advancing the applicability of the revised definition of SD, which was presented earlier.

Similarly to the term SD, the term IKs has evolved over time. To understand the nuances of the meaning of this term, Purcell (1998) encourages to break the term down into two parts: 'Indigenous' and 'knowledge'. The author explains that the part

'Indigenous' signifies 'specific groups of people defined by the criteria of ancestral territory, collective cultural configuration, and historical location in relation to the expansion of Europe' (Purcell, 1998: 258). However, the practice of combining this word with the term 'knowledge' since the 1980s has developed an ideological and social sciences perspective which highlights the presence of unequal power relations brought about by colonisation and the post-colonial context.

Sillitoe (2006: 1–2) elaborates on the definition of IKs by emphasising that they mean 'any understanding rooted in local culture. It includes all knowledge held more or less collectively by a population that informs interpretation of things. It varies between regions. It comes from a range of sources, is a dynamic mix of past 'tradition' and present invention with a view to the future…Although IK is more widely shared generally than specialized scientific knowledge, no one person or social group knows it all. Its distribution is uneven. There may be some clustering of certain knowledge within populations (e.g. by gender, age, specialist status etc., maybe reflecting political power)'. The essence of IKs may be summarised in the following seven principles, 'First, knowledge is holistic, cyclic, and dependent upon relationships and connections to living and non-living beings and entities. Second, there are many truths, and these truths are dependent upon individual experiences. Third, everything is alive. Fourth, all things are equal. Fifth, the land is sacred. Sixth, the relationship between people and the spiritual world is important. Seventh, human beings are least important in the world' (Hart, 2010: 3, citing Simpson, 2000).

The history of colonialism and its aftermath has been coupled with epistemic violence against IKs as well as assigning a secondary position to IKs (Ocholla, 2007; Mawere, 2014; Mawere and Awuah-Nyamekye, 2015). This has resulted in little institutionalisation of IKs (Ezeanya-Esiobu, 2019). 'The international scientific knowledge' (Sillitoe, 2006: 2) which is a form of Western knowledges (WKs) (Brigg, 2016) has occupied the primary position, taking away from IKs' right to be a form of science too. Nevertheless, the framing of IKs as a science is illustrated, for example, by Mawere (2014) who referred to African localised understanding of the environment as science. Similarly, the term 'Indigenous science' is used by Wooltorton et al. (2020: 931) to mean 'a way of understanding and finding our way in the world' and 'challenge the often-assumed idea that western science represents definitive 'truth''. Clearly, the inclusion of the term 'international' in 'the international scientific knowledge', which does not represent the international context fully, serves as evidence of the epistemic colonisation of IK. The distinction between IK and 'the international scientific knowledge' necessitates clarifying the geopolitical localisation of the two. We should turn here to the ideas of the Global South and the Global North. Dados and Connell (2012: 12) explain that "The phrase "Global South" refers broadly to the regions of Latin America, Asia, Africa, and Oceania. It is one of a family of terms, including "Third World" and "Periphery," that denote regions outside Europe and North America, mostly (though not all) low-income and often politically or culturally marginalized". The Global North, which is also often referred to as the West, is Euro-North American-centred (Ndlovu-Gatsheni, 2015).

The difference between IKs and WKs is that 'IKs are typically identified as holistic, embedded, contingent and relational in contrast to WKs as atomistic, reductionist, abstract and absolute' (Brigg, 2016: 152). However, the distinction is not that clear-cut. Brigg (2016) warns against making wholesale distinctions between IKs and WKs because WKs, she argues, are more relational than they may appear predominantly because of the relational aspect of Western science. Conversely, IKs are not merely cultural as, for example, 'IKs can and do speak to crucial questions about the nature and ordering of the world in ways that are not always fluid and negotiable' (Brigg, 2016: 153). A more pessimistic image of the relationship between IKs and WKs is presented by Higgins and Kim (2019: 124): 'most social science methodologies always already have a relationship to Indigeneity, albeit a problematic one in which processes of knowledge production (re)produce Indigenous bodies and ways-of-knowing-in-being as abject otherness against which Western modernity is normalized and naturalized'.

The marginalisation of IKs has been at the heart of the idea to integrate them with other forms of knowledge. Action has been taken by stakeholders to achieve this aim (Battiste & Youngblood, 2000; Mbah et al., 2021; Ocholla, 2007). A range of efforts by various stakeholders with a broader agenda to support Indigenous populations targeted not only to protect but also to include and empower Indigenous peoples in the interventions which target benefitting them. The UN has orchestrated a number of such interventions (Breidlid, 2009; Kaya, 2014). According to these authors, in addition to the interventions specifically targeting Indigenous peoples such as the 2007 UN Declaration on the Rights of Indigenous Peoples, there are others—such as the famous SDGs. While all SDGs are relevant to Indigenous populations and there are six specific references to such populations in the SDG agenda, the importance of 'culture as a dimension of development' is side-lined and does not represent Indigenous philosophies as it should be indivisible from other dimensions of development such as economy, environment, etc. (Yap & Watene, 2019: 456). Indigenous peoples remain marginalised in different areas, such as education as well as in the framing of the current SDG project, even despite the universality and participatory nature of the SDGs (Winkler & Satterthwaite, 2017).

Apparently, more work needs to be done to correct this problem. Increasing the representation of Indigenous peoples in, for instance, the exercising of the SDGs and ensuring that international actors take IKs into account more, risks perpetuating the marginalisation of this group because of the perpetuation of their passive position which has been constructed as such by colonialism and the post-colonial world. Appealing to decoloniality is presented in this chapter as an essential medium of mobilising IKs for SD.

Decoloniality is distinct from decolonisation, the latter being one of the aspects of decoloniality—predominantly about the liberation of 'colonised and Indigenous subjects' (Kumalo & Praeg, 2019: 1). 'Decoloniality is not only a long-standing political and epistemological movement aimed at the liberation of (ex-) colonized peoples from global coloniality but also a way of thinking, knowing, and doing. It is part of marginalized but persistent movements that merged from struggles against

the slave trade, imperialism, colonialism, apartheid, neo-colonialism, and underdevelopment as constitutive negative elements of Euro-North American-centric modernity' (Ndlovu-Gatsheni, 2015: 485). The decoloniality movement rests on the idea that the following three domains are colonised. First, the coloniality of power is recognised in how world politics was constructed as 'racially hierarchised, Euro-American-centric, Christian-centric, patriarchal, capitalist, hetero-normative, hegemonic, asymmetrical, and modern power structure' (Ndlovu-Gatsheni, 2015: 489, citing Grosfoguel, 2007). Second, the coloniality of knowledge is seen in how 'indigenous knowledges have been pushed to what became understood as 'the barbarian margins of society'' (Ndlovu-Gatsheni, 2015: 489). Finally, the coloniality of being is expressed in how people understand their own selves as well as those around them and it is 'a struggle to regain lost subjecthood' for the those who are marginalised (Ndlovu-Gatsheni, 2015: 489).

Arguably, these three aspects of coloniality are interrelated as, for instance, certain power relations facilitate the production of a central knowledge that sustains those power relations. Ndlovu-Gatsheni (2015) further states that decoloniality calls on intellectuals from imperialist countries to take action, which suggests that the author sees the decoloniality knowledge of the intellectuals as having potential to change the asymmetrical power in the world and free the colonised being of marginalised Indigenous groups.

Knowledge is produced and disseminated through different forms of education, which is positioned as a soft power in the global sustainability debate because education contributes to the formation of certain human habits related to SD (Sayamov, 2013). Unterhalter (2014) suggested that education might have been one of the most important areas for supporting MDGs, and there are a few studies that highlight the driving role of education in the SDG agenda (Annan-Diab & Molinari, 2017; Bengtsson et al. 2018; Persaud, 2017; Vladimirova & Le Blanc, 2016). This is despite the existence of a goal specifically focused on education: Goal 2 within the MDGs—MDG 2 'Achieve universal primary education', and Goal 4 within the SDGs—SDG 4 'Quality Education' (Sinha, 2016; Unterhalter, 2014).

Rather than integrating colonised IKs with WKs, this chapter calls for the need to continue researching IKs and ultimately to decolonise them. IKs would then themselves take, rather than be granted by colonisers, their place in the global system of knowledges. IKs would also more actively influence SD which, in Hummels and Argyrou's (2021) terms, is rooted in sustainable entrepreneurship which should be seen as an international endeavour integral not just to the Euro-North-American context but to the Global South. Ultimately, a shift of knowledge paradigms is needed whereby global inclusive knowledge systems exist. This is possible largely due to a shift in research methodologies, which currently are dominated by Western approaches.

4 The Concept 'Methodology'

This section presents a literature review about the concept 'methodology', which is the final key term this chapter aims to explain, having unpacked the terms 'SD' and 'IKs'. While this section is focused on the term 'methodology', it builds on the discussion of the other two terms above and fosters a discussion around the shortcomings of Western methodological approaches on IK research as well as a discussion about the need for IK research to be informed by decoloniality as an overarching research vision, rather than Western standpoints. This section also outlines a few success stories in IK research after emphasising the shortcomings of a wide range of studies into IK that have not managed to move away from Western ways of doing research.

4.1 Shortcomings of Westerns Methodological Approaches on IK Research

A lot of existing research into IKs draws on established Western lenses. For example, in science education studies, researchers draw on aspects of the scientific paradigms from their science training, seeking to be objective which may not be appropriate for IK research (Keane et al., 2016, 2017). Most of these paradigms are associated with specific disciplines and act as the primary way in which knowledge is generated which, again, does not always work for IK research (Smith et al., 2016). The same goes for Western convention of separating methodology from the content of the results which it produces. However, IK methodology may, in fact, itself be the content (Gupta, 2012; Martin, 2017).

A lot of IK research also tends to be done in consultation with Indigenous communities rather than with their involvement as equal actors in the research process (Goulding et al., 2016). Such unequal power relations between the WKs and IKs whereby WKs lead the enquiry into IKs can be summarised as 'the 5D data' that is about difference, disparity, disadvantage, dysfunction, and deprivation (Walter, 2018: 257).

The unequal power relations are also accompanied by a particular pattern of the dissemination and usage of the results of such research. They become consolidated and institutionalised away from the Indigenous communities, where it is not relevant for the majority of the knowledge holders. An example of this are academic publications which follow the rules of Western academia and are out of the reach of a non-specialised Indigenous audience (Keane et al., 2017; Smith et al., 2016).

These shortcomings of Western approaches to IKs research amount to a failure to do much progress for the emancipation of Indigenous populations but rather to honour Western approaches in addressing the issue of the marginalisation of IKs. Kumalo and Praeg (2019: 1) illustrate this, stating that such 'performances of 'decoloniality', which often takes the form of elaborately ritualised and expensive decolonial lectures

delivered by international scholars, amount to a form of 'box-ticking' that lacks substantive engagement with locally situated struggles, debates and dialogues. The latter …do little more than shore up white ignorance and intellectual mediocrity'.

4.2 An Indigenous Research Paradigm Informed by Decoloniality

Decoloniality, introduced earlier in this chapter, is a solution to this problem. It is a tool to liberate IKs from their victimised position, into which they were forced by Western approaches. It is important to understand that IK research is not about 'inventing anything but reclaiming Indigenous research Knowledges and methodologies [that] have existed over millennia' (Ryder et al., 2020: 255). Dados and Connell's (2012: 13) representation of the 'world perspective from the Global South', using the world map with the South appearing at the top and the North at the bottom, can also be seen as a portrayal of the repositioning of the focus when approaching IK research.

While the background of the researcher matters in shaping research (Keane et al., 2016; Rubin & Rubin, 2012), it is the adoption of 'an indigenous research paradigm' (Hart, 2010: 1) or 'a decolonising research paradigm' (Wooltorton et al., 2020: 918) that can decolonise IK research and make it serve its emancipatory purpose. Guba and Lincoln (1994) argue that the decisions about research methods are secondary to the questions of wider methodological choices, such as the research paradigm. Although the term a 'research paradigm' has been over-used in its application to a wide range of issues, the general consensus is that it is as a scientific tradition or approach that presupposes certain assumptions and influences research (Blaikie, 2000; Gilbert, 2001); Guba and Lincoln, 1994). The question of paradigms is key when designing research which, according to Annan-Diab and Molinari (2017), is a guiding power in all areas and a potential central driver in SD. In order to identify what makes the Indigenous research paradigm, the answers to four fundamental pillars of research paradigms should be reviewed: ontology, epistemology, methodology and axiology (Guba and Lincoln, 1994; Wilson, 2001).

Hart (2010) presents an excellent account of the answers to these questions which are also partly traced in the work of other authors, cited below. In brief, reciprocity and spirituality form two key elements of an Indigenous ontology.

An Indigenous epistemology 'is a fluid way of knowing derived from teachings transmitted from generation to generation by storytelling, where each story is alive with the nuances of the storyteller. It emerges from traditional languages emphasizing verbs, is garnered through dreams and visions, and is intuitive and introspective. Indigenous epistemology arises from the interconnections between the human world, the spirit, and inanimate entities. Another aspect of Indigenous epistemology is perceptual experiences. However, an Indigenous definition of perception is relevant' (Hart, 2010: 8).

Indigenous methodologies are those where the approach to, and the undertaking of, research process and practices are about Indigenous perspectives and values (Walter & Suina, 2019). Such approaches make the researcher an Indigenous researcher (Hart, 2010) who researches what is important for Indigenous populations and what can be used in practice (Goulding et al., 2016; Hart, 2010), who is guided by respect, responsibility, reciprocity, reverence (Smith, 2019), resistance to oppression and the privileging of Indigenous voices (Martin, 2017) as ethical principles of working with Indigenous peoples.

An Indigenous axiology relies on the following values, identified by Hart (2010: 9–10):

1. Indigenous control over research, which can be demonstrated by having Indigenous people developing, approving, and implementing the research;
2. A respect for individuals and community, which can be demonstrated by a researcher seeking and holding knowledge and being considerate of community and the diversity and unique nature that each individual brings to community;
3. Reciprocity and responsibility, which can be demonstrated in ways a researcher would relate and act within a community, such as a researcher sharing and presenting ideas with the intent of supporting a community;
4. Respect and safety, which can be evident when the research participants feel safe and are safe. This includes addressing confidentiality in a manner desired by the research participants;
5. Non-intrusive observation, where one, such as a researcher, would be quietly aware and watching without interfering with the individual and community processes;
6. Deep listening and hearing with more than the ears, where one would carefully listen and pay attention to how his/her heart and sense of being is emotionally and spiritually moved;
7. Reflective non-judgement, where one would consider what is being seen and heard without immediately placing a sense of right or wrong on what is shared and where one would consider what is said within the context presented by the speaker;
8. To honor what is shared, which can be translated to fulfilling the responsibility to act with fidelity to the relationship between the participants and the researcher and to what has been heard, observed, and learned;
9. An awareness and connection between the logic of the mind and the feelings of the heart, where both the emotional and cognitive experiences are incorporated into all actions;
10. Self-awareness, where one would listen and observe oneself, particularly in relation to others during the research process;

11. Subjectivity, where the researcher acknowledges that she or he brings her or his subjective self to the research process and openly and honestly discusses this subjectivity.

4.3 Examples of Indigenous Methodologies

An Indigenous research paradigm is not any definitive and prescriptive single way of doing IK research but rather a lighthouse in the research journey of an Indigenous researcher. Indigenous methodologies are meant to be decolonising and emancipatory (Chilisa, 2017; Clement, 2019; Keane et al., 2017; Smith, 2019), producing the knowledge which can coexist productively and equally with WK (Goulding et al., 2016; Higgins & Kim, 2019; Ryder et al., 2020), actively taking the equal position in the global system of knowledges to which it belongs.

The concept 'methodology' is often confused with the notion 'method' (VanWynsberghe & Khan, 2007). The definition of methodology which demonstrates that it is a broader term than a method is the following, 'a theory and analysis of how research should proceed… in the context of the dominant paradigm' (VanWynsberghe & Khan, 2007: 3, citing Harding, 1987). Gilbert's (2001: 220) reference to a combination of 'techniques and epistemology' as a feature of methodology highlights the interconnection amongst methodology and epistemology as elements of a research paradigm.

Gilbert's (2001) emphasis on the link between epistemology and methodology can be illustrated by Juutilainen et al.'s (2020) study who view nonhierarchical approaches to relationships as an expression of Indigenous epistemologies guiding Indigenous methodology in health care and biomedical research.

Similalry, Wooltorton et al. (2020) develops a place-based cooperative inquiry methodology which demonstrates the link to the axiology values identified by Hart (2010) and presented above, such as value seven about being reflective. Wooltorton et al.'s (2020) methodology uses Indigenous and Western science within Indigenous-led environmental education. This methodology is a form of action research which 'includes four ways of knowing: experiential (action), presentational or creative (reflective), propositional or conceptual (reflective) and post-conceptual/participative (action and preplanning for future cycles)' (Wooltorton et al., 2020: 920).

Hart's (2010) axiology ideas of the connection between the logic of the mind and feeling can also be traced in Te Ava and Page's (2020) proposition to use Tivaevae Model as an Indigenous Methodology in Cook Islands education settings. This model draws from artistic quilting which plays an important part in the lives of Cook Islanders. Te Ava and Page (2020: 70) explain 'how patchwork creative pieces come together to create a story and can be used as a metaphor of the past, present and future integration of social, historical, spiritual, religious, economic and political representations of Cook Island culture'.

These are a few examples of IK research which attempted to follow an Indigenous research paradigm and liberate itself and its results from Western approaches. Decoloniality as an indispensable medium in this process is a way forward in the quest for the emancipation of IKs as one of the important tools in SD.

5 Conclusion

This chapter has provided another step in global efforts to highlight the problems that undermine the wellbeing of the marginalised which, in turn, compromises, global progress towards developing a sustainable and inclusive society. This review chapter has mapped three key notions of the book: SD, IKs and methodology, emphasising the importance of decolonising the voices of Indigenous groups in knowledge production. The review of these three key concepts has also explained that despite the fact that the orchestration of SD in the UN projects to date has pitfalls, the UN evidently has the power to orchestrate policy so it can orchestrate the applicability of the revised definition of SD, put forward by Hummels and Argyrou (2021) by appealing to knowledge as a useful tool in this process. Appealing to the available knowledge and further research for the production of new global knowledge is key for SD. While this broad idea is not new and has attracted the attention of scholars (e.g., Annan-Diab & Molinari, 2017), the origin, nature and effect of the knowledge that is produced should be problematised. It is the Western epistemologies that dominate the global knowledge systems. Researching and mobilising IKs was a key area in this chapter. Rather than simply aiming to combine IKs with WKs, which would not dismantle the colonised position of IKs, this chapter has demonstrated the need to decolonise IKs by going beyond Western approaches in IK research. This is crucial in liberating IKs to enable them themselves take, rather than be granted by colonisers, their equal position in the system where other knowledges exist. This is crucial also for SD, which has already been deemed as dependant on IKs as well as other forms of knowledge (Breidlid, 2009; Kaya, 2014; Magni, 2017). Liberated IKs would also actively influence SD which, in Hummels and Argyrou's (2021) terms, is rooted in sustainable entrepreneurship which, in turn, should be seen as an international endeavour, integral not just to the Euro-North-American context but to the Global South as well.

References

Abbott, K. W., & Bernstein, S. (2015). The high-level political forum on sustainable development: Orchestration by default and design. *Global Policy, 6*(3), 222–233.

Abbott, K. W., Genschel, P., Snidal, D., & Zangl, B. (2016). Two logics of indirect governance: Delegation and orchestration. *British Journal of Political Science, 46*(4), 719–729.

Annan-Diab, F., & Molinari, C. (2017). Interdisciplinarity: Practical approach to advancing education for sustainability and for the Sustainable Development Goals. *The International Journal of Management Education, 15*(2), 73–83.

Assefa, Y., Van Damme, W., Williams, O. D., & Hill, P. S. (2017). Successes and challenges of the millennium development goals in Ethiopia: Lessons for the sustainable development goals. *BMJ Global Health, 2*(2), 1–7.

Battiste, M., & Youngblood, J. (2000). *Protecting indigenous knowledge and heritage: A global challenge*. Ubc Press.

Bengtsson, S. E., Barakat, B., & Muttarak, R. (2018). *The role of education in enabling the sustainable development agenda*. Routledge.

Bernstein, S. (2017). The United Nations and the governance of sustainable development goals. In Kanie, N., and Biermann, F. (eds) Governing through goals: Sustainable Development Goals as governance innovation. The MIT Press: London, pp.213–239.

Biermann, F., Kanie, N., & Kim, R. E. (2017). Global governance by goal-setting: The novel approach of the UN Sustainable Development Goals. *Current Opinion in Environmental Sustainability, 26*, 26–31.

Blaikie, N. W. H. (2000). *Designing social research: The logic of anticipation*. Polity Press.

Breidlid, A. (2009). Culture, indigenous knowledge systems and sustainable development: A critical view of education in an African context. *International Journal of Educational Development, 29*(2), 140–148.

Brigg, M. (2016). Engaging indigenous knowledges: From sovereign to relational knowers. *The Australian Journal of Indigenous Education, 45*(2), 152–158.

Carant, J. (2017). Unheard voices: A critical discourse analysis of the Millennium Development Goals' evolution into the Sustainable Development Goals. *Third World Quarterly, 38*(1), 16–41.

Chichilnisky, G. (1997). What is sustainable development? *Land Economics,* pp. 467–491.

Chilisa, B. (2017). Decolonising transdisciplinary research approaches: An African perspective for enhancing knowledge integration in sustainability science. *Sustainability Science, 12*(5), 813–827.

Clement, V. (2019). Beyond the sham of the emancipatory enlightenment: Rethinking the relationship of indigenous epistemologies, knowledges, and geography through decolonizing paths. *Progress in Human Geography, 43*(2), 276–294.

Dados, N., & Connell, R. (2012). The global south. *Contexts, 11*(1), 12–13.

Elliott, J. (2012). *An introduction to sustainable development*. Routledge.

Ezeanya-Esiobu, C. (2019). *Indigenous knowledge and education in Africa*. Springer Nature.

Fejes, A. (2006). The Bologna process—Governing higher education in Europe through standartisation. *Revista Española de Educación Comparada, 12*, 203–231.

Fukuda-Parr, S. (2014). Global goals as a policy tool: Intended and unintended consequences. *Journal of Human Development and Capabilities, 15*(2–3), 118–131.

Fukuda-Parr, S., Greenstein, J., & Stewart, D. (2013). How should MDG success and failure be judged: Faster progress or achieving the targets? *World Development, 41*, 19–30.

Gellers, J. C. (2016). Crowdsourcing global governance: Sustainable development goals, civil society, and the pursuit of democratic legitimacy. *International Environmental Agreements: Politics, Law and Economics, 16*(3), 415–432.

Gilbert, G. (2001). Research, theory and method. In G. N. Gilbert (Ed.), *Researching social life* (2nd ed.). Sage.

Goulding, D., Steels, B., & McGarty, C. (2016). A cross-cultural research experience: Developing an appropriate methodology that respectfully incorporates both Indigenous and non-Indigenous knowledge systems. *Ethnic and Racial Studies, 39*(5), 783–801.

Grek, S. (2008). From symbols to numbers: The shifting technologies of education governance in Europe. *European Educational Research Journal, 7*(2), 208–218.

Guba, E. G., & Lincoln, Y. S. (1994). Competing paradigms in qualitative research. In: *Handbook of qualitative research* (pp. 105–117).

Gupta, A. D. (2012). Way to study indigenous knowledge and indigenous knowledge system. *Cultural Anthropology, 373*, 373–393.

Hart, M. A. (2010). Indigenous worldviews, knowledge, and research: The development of an indigenous research paradigm. *Journal of Indigenous Social Development, 1*(1), 1–16.

Heleta, S., & Bagus, T. (2020). Sustainable development goals and higher education: Leaving many behind. *Higher Education, 81*(1), 163–177.

Higgins, M., & Kim, E.-J.A. (2019). De/Colonizing methodologies in science education: Rebraiding research theory–practice–ethics with indigenous theories and theorists. *Cultural Studies of Science Education, 14*(1), 111–127.

Hudson, C. (2011). Evaluation—The (not so) softly-softly approach to governance and its consequences for compulsory education in the Nordic countries. *Education Inquiry, 4*(2), 671–687.

Hummels, H., & Argyrou, A. (2021). Planetary demands: Redefining sustainable development and sustainable entrepreneurship. *Journal of Cleaner Production, 278*, 1–11.

Jacob, A. (2017). Mind the gap: Analyzing the impact of data gap in Millennium Development Goals' (MDGs) indicators on the progress toward MDGs. *World Development, 93*, 260–278.

Juutilainen, S. A., Jeffrey, M., & Stewart, S. (2020). Methodology matters: Designing a pilot study guided by indigenous epistemologies. *Human Biology, 91*(3), 141–151.

Kanie, N., & Biermann, F. (Eds.). (2017). *Governing through goals: Sustainable development goals as governance innovation.* MIT Press.

Kaya, H. O. (2014). Revitalizing African indigenous ways of knowing and knowledge production. In S. Purvis, & M. Pang (Eds.), *Restoring indigenous self-determination: Theoretical and practical approaches* (pp. 88–95). E-International Relations.

Keane, M., Khupe, C., & Muza, B. (2016). It matters who you are: Indigenous knowledge research and researchers. *Education as Change, 20*(2), 163–183.

Keane, M., Khupe, C., & Seehawer, M. (2017). Decolonising methodology: Who benefits from indigenous knowledge research? *Educational Research for Social Change, 6*(1), 12–24.

Keiner, M. (2005). *History, definition (s) and models of sustainable development*. ETH Zurich.

Kumalo, S., & Praeg, L. (2019). Decoloniality and justice a priori. *Journal of Decolonising Disciplines, 1*(1), 1–10.

Magni, G. (2017) Indigenous knowledge and implications for the sustainable development agenda. *European Journal of Education, 52*(4), 437–447.

Martin, B. (2017). Methodology is content: Indigenous approaches to research and knowledge. *Educational Philosophy and Theory, 49*(14), 1392–1400.

Mawere, M. (2014). *Culture, indigenous knowledge and development in Africa: Reviving interconnections for sustainable development*. Langaa Rpcig.

Mawere, M., & Awuah-Nyamekye, S. (Eds.). (2015). *Between rhetoric and reality: The state and use of indigenous knowledge in post-colonial Africa.* Langaa RPCIG.

Mbah, M., Johnson, A. T., & Chipindi, F. M. (2021). Institutionalizing the intangible through research and engagement: Indigenous knowledge and higher education for sustainable development in Zambia. *International Journal of Educational Development, 82*, 1–9.

Ndlovu-Gatsheni, S. J. (2015). Decoloniality as the future of Africa. *History Compass, 13*(10), 485–496.

Ocholla, D. (2007). Marginalized knowledge: An agenda for indigenous knowledge development and integration with other forms of knowledge. *The International Review of Information Ethics, 7*, 236–245.

Ogujiuba, K., & Jumare, F. (2012). Challenges of economic growth, poverty and development: Why are the Millennium Development Goals (MDGs) not fair to sub-saharan Africa? *Journal of Sustainable Development, 5*(12), 52–64.

Ostrom, E. (2010). Beyond markets and states: Polycentric governance of complex economic systems. *American Economic Review, 100*(3), 641–672.

Parris, T. M., & Kates, R. W. (2003). Characterizing and measuring sustainable development. *Annual Review of Environment and Resources, 28*(1), 559–586.

Persaud, A. (2017). Integrated planning for education and development. *European Journal of Education, 52*(4), 448–459.
Purcell, T. (1998). Indigenous knowledge and applied anthropology: Questions of definition and direction. *Human Organization, 57*(3), 258–272.
Rubin, H. J., & Rubin, I. (2012). *Qualitative interviewing: The art of hearing data* (3rd ed.). SAGE.
Ryder, C., Mackean, T., Coombs, J., Williams, H., Hunter, K., Holland, A. J., & Ivers, R. Q. (2020). Indigenous research methodology–weaving a research interface. *International Journal of Social Research Methodology, 23*(3), 255–267.
Sayamov, Y. N. (2013). Education as a global "soft power" for sustainable development. *Campus-Wide Information Systems, 30*(5), 346–357.
SDGs. (2021). *Report of the World Commission on environment and development—Our common future*. https://sustainabledevelopment.un.org/milestones/wced. Accessed September 24, 2021.
Sillitoe, P. (2006). Indigenous knowledge in development. *Anthropology in Action, 13*(3), 1–12.
Sinha, N. (2016). Evaluation of Right to Education (RTE) in the light of Millennium Development Goals (MDG): A psycho-social study. *International Journal of Arts & Sciences, 9*(1), 469–479.
Smith, L. T. (2019). *Decolonizing research: Indigenous storywork as methodology*. Bloomsbury Publishing.
Smith, L. T., Maxwell, T. K., Puke, H., & Temara, P. (2016). Indigenous knowledge, methodology and mayhem: What is the role of methodology in producing indigenous insights? A discussion from mātauranga Māori. *Knowledge Culture, 3*(4), 131–156.
Te Ava, A., & Page, A. (2020). How the Tivaevae model can be used as an indigenous methodology in Cook islands education settings. *The Australian Journal of Indigenous Education, 49*(1), 70–76.
Unterhalter, E. (2014). Measuring education for the millennium development goals: Reflections on targets, indicators, and a post-2015 framework. *Journal of Human Development and Capabilities, 15*(2–3), 176–187.
VanWynsberghe, R., & Khan, S. (2007). Redefining case study. *International Journal of Qualitative Methods, 6*(2), 1–9.
Viola, L. (2015). The governing shift: From multilateral IGOs to orchestrated networks. In R. Mayntz (Ed.), *Negotiated reform: The multilevel governance of financial regulation* (Vol. 85). Campus Verlag.
Visseren-Hamakers, I. J. (2020). The 18th sustainable development goal. *Earth System Governance, 3*, 1–5.
Vladimirova, K., & Le Blanc, D. (2016). Exploring links between education and sustainable development goals through the lens of UN flagship reports. *Sustainable Development, 24*(4), 254–271.
Walter, M. (2018). The voice of indigenous data: Beyond the markers of disadvantage. *Griffith Review, 60*, 256–263.
Walter, M., & Suina, M. (2019). Indigenous data, indigenous methodologies and indigenous data sovereignty. *International Journal of Social Research Methodology, 22*(3), 233–243.
WCED. (1987). *Report of the World Commission on Environment and Development*. https://www.un.org/ga/search/view_doc.asp?symbol=A/42/427&Lang=E. Accessed October 1, 2021.
Weiss, T. G. (2018). *The United Nations and changing world politics*. Routledge.
Wilson, S. (2001). What is indigenous research methodology? *Canadian Journal of Native Education, 25*(1), 175–179.
Winkler, I. T., & Satterthwaite, M. L. (2017). Leaving no one behind? Persistent inequalities in the SDGs. *The International Journal of Human Rights, 21*(8), 1073–1097.
Wooltorton, S., Collard, L., Horwitz, P., Poelina, A., & Palmer, D. (2020). Sharing a place-based indigenous methodology and learnings. *Environmental Education Research, 26*(7), 917–934.
Yap, M. L. M., & Watene, K. (2019). The sustainable development goals (SDGs) and indigenous peoples: Another missed opportunity? *Journal of Human Development and Capabilities, 20*(4), 451–467.