

13. Sustainability in the business school syllabus: mind the gap

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INTRODUCTION

This chapter concerns challenges that most professors in business schools experience when they are planning a new course, or revising an existing course, and in particular when the syllabus is highly susceptible to changes in technologies, market structures, or business models. This chapter will highlight two challenges: first, that of balancing established and “radical” literature. Thus, between research which has passed the test of time, and that which attracts attention due to its originality or provocative quality. It is expected that students are familiar with the most prominent texts and methodologies in the relevant literature. More contested and recent literature may stimulate students’ creativity and ensure that the course is up to date with current releases and should therefore also be given attention. The second challenge is to balance the academic knowledge with insights into the operative challenges of businesses and markets. Business School students are expected to master more than recounting the main elements in the course syllabus. They should also be able to reflect on the validity of these elements by examining existing businesses and industries and how they are affected by external actors and frameworks.

Both balancing acts are addressed in the planning process for a new master’s course on “Sustainable business practices”. Teaching sustainable economics demands the personal dedication of all members of the faculty, according to Araç and Madran (2014) – in line with the Principles of Responsible Management Education (PRME), which is a voluntary engagement platform for economics and management education. It is suggested that students’ engagement in these topics is not so much determined by the selection of syllabus as by how they are challenged to develop “moral imagination” (Fougère et al., 2014). A study of teaching practices in Europe indicates that this impact is best achieved by affecting the problem-solving skills of students, not by solving theoretical questions (Chiodo et al., 2013). This chapter focuses on

Table 13.1 Chapter structure: the syllabus gap exemplified in accounts of three cases referring to two balancing acts

		BALANCING ACTS:	
		Established <> Radical	Academic <> Operative
CASES:	“Property rights” in the “circular economy”	Syllabus/Research agenda	Syllabus/Research agenda
	“Energy” as part of a “sustainable business strategies”	Syllabus/Research agenda	Syllabus/Research agenda
	“Status of biodiversity” in the “green economy”	Syllabus/Research agenda	Syllabus/Research agenda

three cases in order to exemplify the two balancing acts: the discussion of “property rights” in accounts of the circular economy; the role of “energy” in accounts of the sustainable business strategies; and the status of our “biodiversity” in accounts of a green economy. In each of these cases we discuss how a textbook for a planned master’s course covers these issues.

We refer to differences between the research covered by the cases, and the textbook as a *syllabus gap* and discuss whether, and to what degree, there is and should be such a gap, given the educational context of teaching students without extensive work experience. The thematic structure of this chapter is shown in Table 13.1.

The issues considered in this chapter are normally not included in evaluations of business schools. According to Pettersen (2013), institutional evaluations of business schools demanded by European accreditation bodies (e.g., EQUIS or EFMD), typically capture three dimensions; the *input factors* (size and quality of workforce, students, and applicants), the *process factors* (quality systems and student surveys), and the *result factors* (grade levels, internal/external assessments, and employability of graduate students). Balancing between established knowledge and recent research results, and between academic and practical approaches, is not typically covered by these evaluations. These balancing acts rely on course-specific contexts and contents that are not easily aggregated at a sector level or at the international level. The aim of this chapter is not to analyse institutional change, nor to conduct a comparative analysis of business schools, but to highlight how business schools handle gaps between the research agenda and the syllabus in order to prepare students for qualified positions in the labour market.

BALANCING ESTABLISHED AND RADICAL LITERATURE

According to John Maynard Keynes, economists are just as influential when they are wrong as when they are right (Ghoshal & Moran, 2005). To illustrate this, Ghoshal and Moran mention that hundreds of thousands of students in management courses have learned about:

- corporate governance and how organizational design and decision-making procedures are mitigating *agency problems* by implementing incentives that are *aligned* with shareholder interests, exemplified by compensation packages including significant stock options;
- monitoring, control, and variants of balanced scorecard, partly to prevent *opportunistic behaviour*;
- Porter's five forces framework suggesting that businesses not only should compete for advantages with their *competitors*, but also for advantages in their interactions with *suppliers, customers, employees, and regulators*.

These "truths" in the neoclassical market theory may, according to Ghoshal and Moran, have contributed to an environment that triggered many corporate scandals during the past decades (failed companies like Enron, Tyco, and Global Crossing) and the ruthless use of risk-minimizing tools in the quest for profits.

Many of the scandals linked to excessive greed in international businesses have involved companies that ensure that compensation packages are aligned with the shareholder interests. We see reference in the human resource management (HRM) literature to the "competitive advantage through people" (Pfeffer, 1994) and to "leadership capital" (Ulrich, 2015). According to David Ulrich his book will "help investors determine the quality of individual leaders within an organization" (Ulrich, 2015, p. 4). We see that the recruitment process and the performance-based compensation of leaders and employees often is framed as an *alignment problem*. The attributes, competence levels and expected performance levels of leaders and employees should be aligned to shareholder interests. This may explain why the individual compensation scheme of a few thousand top corporate management executives in the US is more than 200 times the average salary of their employees (Mishel & Wolfe, 2019).

We also see that one of the most important aims of corporate governance models is to avoid opportunistic behaviour. Performance-based compensation schemes may still not be able to avoid opportunistic behaviour, according to the Wikipedia article on "corporate governance" (Wikipedia, 2020).

The main function of the corporate governance system is to regulate how rights and responsibilities are distributed among governing bodies, management positions and owners, in order to reduce the risk for such opportunistic behaviour, and to put in place a resilient decision-making process. The London Stock Exchange's guide for corporate governance exemplifies this: "The purpose of corporate governance is to ensure the company is run in the long-term interests of the shareholders, it should be those shareholders rather than regulators who decide whether that is actually the case" (London Stock Exchange, 2012, p. 8).

The precedence of the shareholders is considered by most economists to be reasonable, given that the shareholders are the owners, raise the necessary capital, and carry the economic risk. Still, there are many individuals strongly affected by the business who under some circumstances would define acts traditionally considered as "opportunistic behaviour" as *responsible* behaviour. If the board of directors rejected a bid from a large manufacturer based on ethical concerns due to substantial CO₂ emissions and their prohibition of trade unions, even though the bid was the most competitive one, this may be considered opportunistic behaviour by shareholders because it is suboptimal with regard to their economic return. However, the local community surrounding the manufacturing sites of this supplier might at the same time welcome this as responsible behaviour and this might well generate investment opportunities and economic returns in the mid-term or long term.

The market behaviour and strategy of a corporation differ depending on whether customers or suppliers are perceived of as profitable contractual relationships, or as potential partners for shared value-creation. The former view is associated with a zero-sum-game outlook, while the latter is associated with a positive-sum outlook. It seems that Michael E. Porter covers both positions. Porter (1980: pp. 3–6) claims that the state of competition in an industry depends on five competitive threats: new entrants, substitute products and services, the bargaining power of buyers, the bargaining power of suppliers, and rivalry among current competitors, while Porter and Kramer (2011) argue that societal needs, not just economic needs, define markets, and that the purpose of the corporation must be redefined to create shared value: "Major competitors may also need to work together on precompetitive framework conditions" (Porter, 2011, p. 76). In Porter (1980), corporations should look out for competition in all directions, while in Porter (2011), corporations should look for opportunities for shared value-creation. But Porter (2011) is still criticized for seeing social need as a means to an end. Beschorner (2013) argues that corporate management should develop moral capabilities, not just extend their business strategies in the manner described by Porter (2011).

These are examples of established "truths" in the international business school syllabus. When we find literature with this level of dissemination and

acceptance, and an emerging literature criticizing the premises of the established literature, this constitutes – for the purpose of this chapter – examples of “established literature” and “radical literature”.

BALANCING ACADEMIC AND OPERATIVE KNOWLEDGE

In 2014 the economics students at the University of Manchester published a report entitled “Economics, education and unlearning” (PCES, 2014). The students in Manchester criticized the syllabus for being devoted solely to neo-classical economics and neglecting topics like ethics, politics, and history. The report addressed the balance between academic and practical knowledge as well. A study showed that the study programs of the 11 most prestigious business schools in the US and Europe have much in common (Datar et al., 2010, p. 72). The students in Manchester regretted that quantitative methods and algebraic formalization had “supreme status”. They claimed it was illogical to tailor the bachelor’s degree towards the most abstract theory because most of the undergraduates were not going on to higher studies: “... the disconnection between economic theory and real-world analysis and application, prevents students developing a strong ability to communicate economic ideas” (PCES, 2014, p. 36).

This was supported by findings in the international study of top-ranked business schools: “Because business schools are increasingly modelled on academic disciplines, business school research is seen as having only limited impact on managers and the problems they face” (Datar et al., 2010, p. 77).

The PCES report published by the students in Manchester received support from prominent economists, journalists, and policy makers. According to the students, the syllabus at the University of Manchester was out of touch with the practical challenges and contexts of the real economy in the real world. Similar criticism has since been put forward by the members of the network *RethinkingEconomics.org*. Their open letter on “Pluralism of theory, methodology and disciplines” has been signed by nearly 100 student associations in more than 30 countries (*RethinkingEconomics.org*, 2020a). The letter calls for a broadening of the scope of issues included in the business school syllabus to capture the variety observed in the real world. Martin Parker, professor in the Department of Management at the University of Bristol, exemplifies this when he criticizes the notion of “management”:

If management is to become a subject worthy of its name, then it must teach more than just management. We wouldn’t trust a medical school that only studied certain diseases ... We wouldn’t be impressed if a teacher of architecture ignored all buildings that weren’t churches ... That is what the business school is doing with

Table 13.2 Course titles of bachelor's programs in Economics at University of Manchester Economics Department and Stavanger University Business School (October 2020) compared

COURSE TITLES (Bachelor's program in economics)	
MANCHESTER (ECONOMICS DEPARTMENT)	STAVANGER (BUSINESS SCHOOL)
Economic Concepts	Introduction to Business and Leadership*
Principles of Microeconomics	Mathematics and Research Methods
Principles of Macroeconomics	Ethics, CSR and Sustainability*
Welfare, Freedom and Justice*	Organisation, Resources and Management*
Environment and Natural Resource Economics	Strategy*
Money and Banking*	Microeconomy
International Economics*	Basic Accounting and Business Economy*
Economic Development	Marketing
Intermediate Microeconomic Theory	Investment and Finance
Intermediate Macroeconomic Theory	Macroeconomy
Game Theory	Business Project (Internship)*
Agricultural Economics*	Statistics and Social Science Methodology
Health Economics*	Business Accounting and Economic Management*
Behavioural Economics	
Econometrics	
Internship*	

Note: Titles marked with an asterisk (*) are courses that are not predominantly theoretical
Source: For Manchester: <https://www.manchester.edu/docs/default-source/registrar/2019-2020-undergraduate-course-catalog.pdf#cob>; for Stavanger: <https://www.uis.no/studietilbud/oekonomi-og-juss/oekonomi-og-administrasjon/studieplan-og-emner/>.

organizations. It is ... assuming that market managerialism is the only and best way. (Parker, 2018, p. 98)

The aim of the “Curriculum project” of the Rethinking Economics network is to produce alternative teaching modules for the economics education program and to “look at how economic theory applies to modern-day dilemmas” (RethinkingEconomics.org, 2020a). In their “Manifesto for Curriculum Reform” it is claimed that “only 3% of marks required the student to make any link to the real world.” It seems to be a better balance between theory and operative knowledge. If we look at the titles of the compulsory bachelor’s courses at the Department of Economics at the Manchester University compared with the titles at the University of Stavanger Business School (Table 13.2), we see theory-oriented titles in 10 out of 16 courses in Manchester, and 6 out of

13 in Stavanger. This suggests a better balance between theoretical models and empirical issues in both programs than was reported by the Rethinking Economics network.

Even though the balance between theoretical and operative subjects in Manchester and Stavanger seems to differ based on course titles, the official aims of the two undergraduate programs appear quite similar. However, they highlight one aspect each with relevance to the balancing of academic and operative knowledge. We see this in the following two citations.

Citation on the Balance Between Academic and Operative Knowledge (Economics Department at the University of Manchester)

Our program places an emphasis on the development of analytical/critical thinking skills, quantitative and communication skills, and an ethical and global perspective on economic issues.

The aims of the bachelor-program in Manchester include a reference to the ethical and global perspective. Ethical standards vary in different markets and countries. Thus, the practical skills needed to succeed in different markets and countries must differ. This is an important element in *academic research* in strategy, HRM, CSR, global governance, and corporate governance (see Attig et al., 2016; Coffee, 1999; Edwards & Kuruvilla, 2005; Laudal, 2011; Scherer & Palazzo, 2007). At the *operative level*, the focus is not so much on the relative difference in substance, as on the capacity to cope with these differences. The firm must handle multiple cultures with different values and norms without violating their code of ethics and statutory provisions. However, management courses have, according to Ghoshal and Moran (2005), typically included concepts like “agency problems” and “opportunistic behaviour” without any references to morality or ethics; “... by propagating ideologically inspired amoral theories, business schools have actively freed their students from any sense of moral responsibility” (Ghoshal, & Moran, 2005, p. 76).

In this chapter we consider how the gaps between the syllabus and the research agenda may be influenced by the fact that the most important actor in this syllabus – the corporation – typically operates in an environment that covers many different cultures and ethical standards.

Citation on the Balance Between Academic and Operative Knowledge (University of Stavanger Business School)

You will through this program train your critical and systematic thinking and the understanding of economic challenges. The foundation for the analytical parts of this program is provided by courses in mathematics and in statistical methods.

The aims of the bachelor's program in Stavanger suggests that the role of some of the theoretical subjects (in particular mathematics and statistics) is to support analytical skills in the operative area. Thus, it is not only a question of striking a right balance between academic and practical knowledge, but also to ensure that the academic and operative subjects *support each other*. In the discussion on gaps between the syllabus and the research agenda we will look into how academic knowledge may help students relate to the operative knowledge, and vice versa: how operative insights may help students absorb, and reflect on, academic knowledge.

Summing up, we associate “academic knowledge” with models and premises with a general application typically found under the heading of “theory”, while “operative knowledge” is related to empirical knowledge linked to specific trends or skills that affect current business strategies.

We are now ready to consider three cases which will illustrate how we may cope with the two balancing acts, while designing a new master's course as indicated in Table 13.1.

EXPLORING THREE CASES

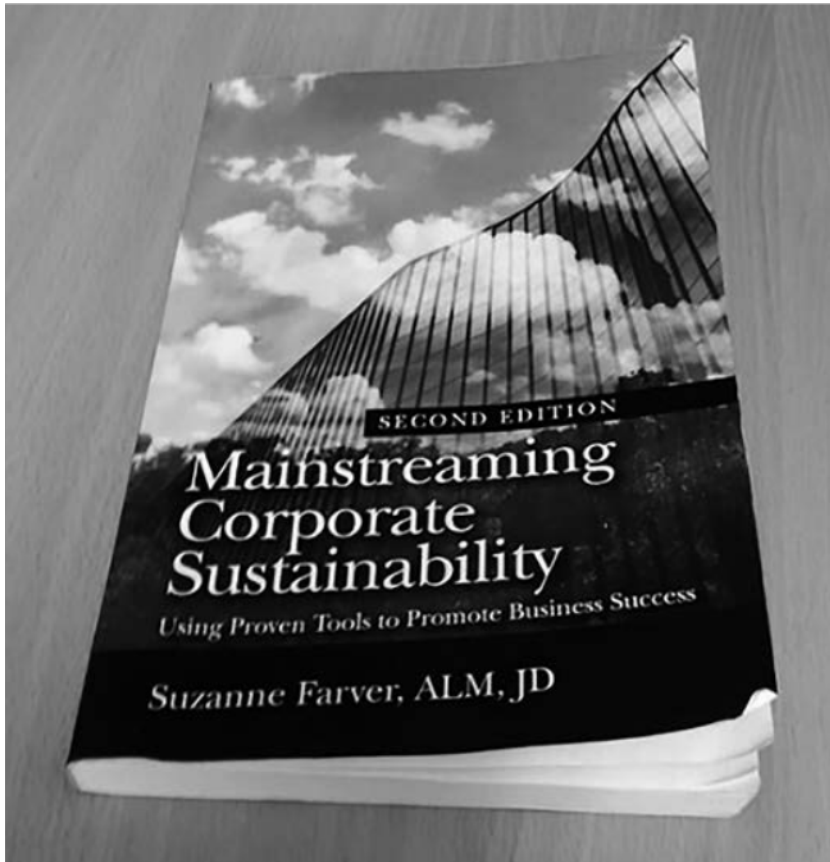
The three cases in this section highlight the balance between the established and the radical literature, and between the academic and operative knowledge, and this is related to a planned master's course where the textbook on the syllabus is written by Suzanne Farver, “Mainstreaming Corporate Sustainability”, second edition (Farver, 2019).

The first edition of the book was designed as lectures for the course “Corporate sustainable business strategies” at Harvard University Extension School in 2012. The book is characterized as an “in-depth primer” and as an “encyclopaedic book” by the publisher. Examples of established and radical literature, and of academic and operative knowledge, are highlighted in the case. Then it is considered how each of these issues is treated in the textbook chosen for the master's course. We start by looking at how “property rights” may be dealt with in texts considering the circular economy.

Case 01: References to Property Rights in the Literature on Circular Economy

“Property rights” in established, and radical literature on circular economy

A “circular economy” is one that is restorative and regenerative by design and is linked to the *reduction, reuse, and recycling* of material resources (the 3R principles¹). According to the Ellen MacArthur Foundation (2013, 2015), it rests on three principles: preserving and enhancing natural capital, optimizing



Source: Farver, 2019.

Figure 13.1 A photo of the textbook

yields from resources in use, and fostering system effectiveness by minimizing negative externalities. The “circular economy” is often contrasted with “linear economy”, which is referred to as a “make–use–dispose system”. In a literature review of articles on circular economy, Prieto-Sandoval et al. (2018) find the understanding of circular economy has passed through a linear phase with an exploitative and then a restorative understanding (up to the 1970s), an industrial ecology phase adding a cyclical understanding (1970s–1990s), and then a circular economy phase adding a regenerative understanding (2000–today).

The idea behind the circular economy is the notion that humans must conserve natural resources because we live in a finite world. A typical claim is the one by Esposito et al. (2018, p. 5): “This linear economy model of mass

production and mass consumption is testing the physical limits of the globe. It is, therefore, unsustainable and a shift toward a circular economy is becoming inevitable.”

The aim is to “close the loop” by maximizing the share of renewable resources in the economy, by reusing and recycling resources, and at the same time minimizing the use of energy and the extraction of non-renewable resources.

Several of the most cited articles on circular economy describe the “servitization” trend² within a circular economy. The ownership of many goods is substituted by a more limited right to “dispose”, “use”, or “steward” the good (e.g., Cooke et al., 2005; Hinton, 2008; Vasiljevic-Shikaleska et al. 2017). According to Walter R. Stahel (2016), “The manufacturer retains ownership of the product and carries the responsibility for the costs of risks and waste”. The Ellen MacArthur Foundation (2013) expects that the emerging circular economy will lead to a change from ownership- to performance-based payment models.

Thus, what is described is an economy where business profits are linked to the long-term performance of products, and an economy where property rights are giving way to user rights (Stahel, 2016, p. 435). This trend was already being discussed 40 years ago. According to Stahel (1982), the gains of an economy emphasizing “product life extension”, as an alternative to the production of new products, is due to the substitution of large-scale capital-intensive production for new products with smaller and more labour-intensive production for product life extension. Hence, extending product life will not only reduce waste, but it should also increase employment.

In recent years it has been argued that software and all kinds of durable goods should be offered as a service. Deloitte (2017) and Forbes (2018) refer to “everything as a service”. According to Deloitte, large manufacturing companies “are evolving from a manufacturer of goods to a purveyor of business outcomes”. Manufacturers refer to this as “servitization” – combining products with services with the aim of creating a more intimate relationship with customers and generating more income over time (Forbes, 2018).

Prominent academic articles on circular economy typically comment on how property rights are being transformed into user rights, while consultancy reports tend to focus on servitization, or similar business-level trends related to user rights. But few articles refer to the implications of a circular economy for the market economy due to the *substitution of property rights with user rights*. Texts that consider the effect of a circular economy on the market economic system, and in particular on the future of property rights, may be labelled “radical”. We shall now consider two radical articles on the impact of the circular economy.

According to Gregson et al. (2015), the vision of circular economy requires a recasting of goods for use and consumption as an activity grounded in the leasing, rather than ownership. “The whole basis of the economy shifts from selling and buying product to the utilization of goods.... To argue for an extended product life is to propose nothing short of a wholesale transformation of the basis of contemporary capitalism and consumption” (Gregson et al., 2015, p. 224). A literature review by Korhonen et al. (2018) finds that the circular economy concept has been created mainly by practitioners, business-people, and policy makers. Korhonen et al. argue that the circular economy concept is vague because its components (e.g., “waste” and “material flows”) are related to the community, history, and the other components at the societal level. These components are social and cultural constructs, according to Korhonen et al. (2018, p. 45) and the circular economy is therefore difficult to define in general terms. At the same time the circular economy represents a profound change of business incentives and opportunities.

The contributions of Gregson et al. and Korhonen et al. are labelled “radical” because they both argue that the transformation of the current economy towards a circular economy will change systemic features of the market economy, not only business strategies and parameters affecting business options.

Academic and operative approach to “property rights” in the circular economy

The day-to-day running of businesses does not include the discussions we find in the radical articles on circular economy. The long-term implications of introducing user rights in place of property rights is not an urgent action point on the agenda of businesses. The operative approach to circular economy focuses on the practical challenges and the market strategy meeting these challenges. Thus, there is little overlap between the radical literature and the operative knowledge employers seek when they recruit graduates from business schools in this area.

This also holds for multinational companies exposed to different cultures and norms in different markets and territories. As a business leader, you either deal with these tensions by tackling the challenge, or by exiting that market/territory if that is the best option. Without being able to influence the larger societal environment, there is no reason for businesses to attempt to influence the driving forces transforming the market economy. For example, to what degree the changing status of individual ownership will influence the political preferences of voters in different EU member states does not have any immediate bearing on the business strategy of most individual companies.

The textbook on sustainable business practices

The textbook considered for the master's course (Farver, 2019) in this case does not refer to "circular economy" or "recycling". However, it does refer to corporations that are increasingly aware of the rewards of reducing the consumption of energy, water, and natural resources in general, and the tendency for corporations to focus on the product life cycle. At this point, the textbook includes paragraphs which resembles a guide of how to calculate the "sustainability footprint" of a corporation. A life-cycle analysis is one of three "tools" that corporations can choose from. This life cycle passes through five stages: extraction, production, transportation, reuse, and recycling/disposal. Farver concludes that it is up to the corporation to adapt the tools used to map and manage its sustainability footprint.

According to Farver (2019), economizing resource use throughout the life cycle is important for the brand and reputation (p. 37) and for increasing productivity (p. 39). Though *product life cycle* is highlighted by Farver (2019), *recycling* is not mentioned. Thus, an important source of economizing is not included in the text: the strategies for extending the lifetime of products by reuse, refurbishing, or remanufacturing. Farver (2019) is only concerned about the options during a *single* life cycle of a product. Farver does not discuss the long-term impact of a circular economy on the market system. We conclude that the textbook does not appear as a "radical" text, in the meaning outlined above, or as concerned about the potential for multiple life cycles of products. However, Farver (2019) *does* highlight how corporations may profit from life-cycle analysis and presents alternative tools for calculating a sustainability footprint.

Summing up, with regard to circular economy, Farver (2019) seems to be based on an established – non-radical – literature and focusing on an operative kind of knowledge.

Case 02: References to Energy in the Literature on Sustainable Business Strategies

Energy in established and radical literature on sustainable business strategies

A "sustainable business strategy" is a qualification of a business strategy which indicates that it contributes to a lasting, or a more or less self-sustained, development in a desired direction. If reference is made to the Brundtland report, the strategy is usually associated with the most cited quote from this report: "meeting the needs of the present without compromising the ability of future generations to meet their own needs" (WCED, 1990, p. 08).

Much of the early literature commenting on sustainable business strategies focuses on businesses' apparent concern for the natural and social

environment. The literature referred to many different motivations, including branding strategies as a means to increasing productivity or as a response to genuine environmental concerns. Following Dyllick and Muff (2016) we saw a shift in the engagement of businesses from merely a concern for the natural and social environment (e.g., described in Elkington, 1994) to a conviction that business needs to set performance targets that makes a difference to the natural and social environment. Dyllick and Hockerts (2002) exemplify this when they observe a shift from focusing on how “eco-efficiency” can be designed to improve the economic performance, to identifying how the firm can reduce waste and pollution and increase resource productivity and energy use in a way that generates an economic reward. This last approach was called “eco-effectiveness” by Dyllick and Hockerts (2002) and has much in common with the triple bottom line concept, emphasizing the interrelatedness between economic, social, and environmental sustainability, introduced by John Elkington (1997).

Dyllick and Muff (2016) find that the first shift, from business concern to the triple bottom line, was followed by a second shift, from the triple bottom line to “outside-in”. The firm extends value creation from being based on maximizing shareholder value, to maximizing the triple bottom line, and finally then supplementing this by creating value for the common good (outside-in). The “shared value”-concept (Porter & Kramer, 2011) is an example of an outside-in strategy.

Schaltegger et al. (2012) argue that the shift to a sustainable business strategy also requires a shift of business models. A sustainable business model must be designed, but it is insufficient to merely *adapt* the model to a sustainable strategy. Case studies show that the business model must be *created for the purpose* of enhancing sustainability. This condition is fulfilled, according to Schaltegger et al. (2012, p. 98), when there is a genuine wish to contribute to solving societal or environmental problems. Energy efficiency is an important objective of sustainable business models in this literature because the use of energy is proportional to the emission of greenhouse gases (GHGs). But the role of energy in the transition towards a sustainable economy goes beyond the role of a natural resource that we economize, as we shall see.

The radical literature in this field is represented by the authors emphasizing how economics and physics are related and pointing to the relevance of the increasing entropy (referring to the second law of thermodynamics) for long-term economic growth (e.g., Ayres, 1998; Ayres & Nair, 1984; Ayres & Warr, 2010; Ayres et al., 2013; Georgescu-Roegen, 1975; Jakimowicz, 2020; Kümmel, 2011). These contributions argue that the depletion of the earth’s limited deposits of fuels and non-renewable resources, and many fragile states of equilibrium in nature, should be understood as a dynamic within a closed system. The economic process cannot go on without a continuous

exchange which alters our environment in a cumulative way, and without being influenced by these alterations (Georgescu-Roegen, 1975). According to Kümmel (2011), our conception of economic growth must take into account the constraints of energy conversion, the limited volume of work, the impact of negative externalities, and the need to recycle goods. This is not captured in most textbooks today. We typically see a self-sustaining circular flow of monetized values between production and consumption. By introducing the physical constraints of economic growth, a basic theorem of orthodox economics is no longer valid, according to Kümmel (2011, p. 173); the theorem that says that a production factor's economic weight is equal to its cost share. Ayres et al. (2013) agree that energy is more important for economic growth than its cost share. Both Kümmel (2011) and Ayres et al. (2013) propose conditions for an alternative economic equilibrium where factor combinations are constrained by technology and by the availability of energy and natural resources. According to Moriarty and Honnery (2014), these models, and current trends, indicate that renewable energy is growing too slowly to significantly change the energy mix in the coming decades.

Academic and operative approaches to energy in sustainable business strategies

The issues and the advice in the radical literature is difficult to take on board for individual businesses that are considering energy use and sustainable business strategies. Businesses cannot on their own substitute monetary values with parameters like the rate of energy conversion or the depletion rate without the support of government regulations and incentives. What most firms *can* do is to save money by saving energy, either by continuing to do what they are doing in a more efficient manner, or by reducing the use of energy due to innovations.

An example of an operative approach to energy is the article by Spicer and Hyatt (2017) analysing the sustainability strategy of Walmart. The management team in Walmart may be seen to subscribe to the outside-in strategy described in Dyllick and Muff (2016). By improving energy efficiency, Walmart claimed it developed a sustainability standard that would have ripple-through effects for the entire supply chain, including its competitors. According to a Walmart executive, sharing the benefits with others did not concern them because “ultimately, it’s consumers we really care about, and the consumer wins regardless” (Spicer & Hyatt, 2017, p. 126).³ Walmart took initiative to a life-cycle-cost assessment project. A small group of products were analysed and monitored, in line with the approaches we find in “radical” literature. However, after two years Walmart decided that the life-cycle-assessment was not economically scalable and ended the project. Spicer and Hyatt (2017) find that many of the problems Walmart encountered were related to the role

of institutional intermediaries, and in particular a consortium Walmart had founded.

The operative approach in this area is not only having difficulty adopting the actions called for in the radical literature. Cases like that of Walmart are also challenged by the lack of access to independent sources. A thorough analysis of the role of energy as part of a sustainable business strategy relies on the business management's own reporting and interpretations. The management of large corporations is not able to present balanced information for two reasons: because it only has detailed knowledge about one firm – its own; and because it is pressured by competitive forces, and the need to always maximize competitive advantages. The management team cannot escape from this and is therefore not suited as the prime source of any research, except for action researchers engaged in field studies.

The textbook on sustainable business practices

Chapter 10 in the textbook considered for the master's course (Farver, 2019) claims that several studies confirm that a sustainable strategy increases diversity and boosts the expertise at board level, promotes a productive dialogue with important stakeholders, and promotes a systematic improvement across the value chain. This contributes to lower costs, more efficient use of resources, more productive employees, and more satisfied customers, according to Farver (2019). We see that the approach of this textbook has much in common with the eco-efficiency approach described in Dyllick and Hockerts (2002). The focus is on how changes related to the natural environment benefit the corporation, not the other way around. We see that the textbook does not incorporate the eco-effectiveness approach (Dyllick & Hockerts, 2002), or the outside-in strategy (Dyllick & Muff, 2016).

Thus, the textbook not only does not refer to radical literature on the role of energy in business economics, but it is also limited to what we may characterize as a conservative outlook in the established literature.

The role of energy in a sustainable business strategy is covered in the textbook's chapter 15. It refers to the "Rule of 10", which stipulates that the costs of fixing a performance problem at the latter stage in the supply chain is ten times more costly than at the former stage. This discussion of energy is reminiscent of the outside-in strategy and has much in common with an operative approach because it highlights how to calculate gains and costs across the supply chain. The approach of the radical literature is captured when Farver (2019, p. 202) mentions that the Rule of 10 also can be applied to energy savings. Farver shows how the state of California relied on these insights when it regulated the energy efficiency of home appliances, forcing changes in the specification and in the manufacturing process, as opposed to relying only on influencing the households' habits when it comes to their use of electricity.

Case 03: References to Biodiversity in the Literature on the Green Economy

Biodiversity in established and radical literature on green economy

In 2011 the United Nations Environmental Program (UNEP) provided a popular definition of a “green economy”: “A green economy is one that results in improved human well-being and social equity, while significantly reducing environmental risks and ecological scarcities” (UNEP, 2011, p. 1).

Among the goals listed by UNEP is to “prevent the loss of biodiversity and ecosystem services” (UNEP, 2011, p. 2). It is said that the concept of a “green economy” is an oxymoron which intends to bundle different, partly contradictory, interests and strategies, and give them a certain legitimacy and coherence (Brand, 2012). Loiseau et al. (2016) deals with this by referring to the many concepts associated with green economy and using two dimensions to distinguish them: the level of change they require, and the degree to which they allow for a substitution between natural and economic capital. A radical conception of the green economy (big change and low substitution acceptance) includes “nature-based solutions” within a “circular economy”, according to Loiseau et al. (2016). This view holds that the prime task of a business strategy is to contribute to the sustainability of nature. The likelihood of a win-win outcome for both corporate profitability and nature is low, given that the expectation is that it is not in the short-term interests of businesses to protect biodiversity. A win-win outcome in this area depends therefore on regulations transforming the competitive strategies in the market.

Another problem related to the protection of biodiversity is whether we should put a price tag on nature, using the price mechanism to balance the interests linked to the wilderness and biodiversity from the economic interests of business. The payment for ecosystem services (services benefiting humans provided by the natural environment) is based on the assumption that there is an undersupply of such services resulting from market failures (Muradian et al., 2013). It is argued that valuation is only useful for natural resources which are easily delineated, recognizing that the level of uncertainty in our understanding of ecological processes suggests that we avoid pricing natural resources when the consequences are unforeseeable and/or irreversible (Daily et al., 2000). A radical approach demanding significant changes of current business practices is here exemplified by the contribution of Hawken et al. (1999). According to Hawken et al., natural resources that are critical for human beings, or too complex to predict, should not be given a price tag for three reasons: they lack known substitutes; the valuation often is imprecise at best; and the price normally only accounts for the value of human employment, not the uncompensated or intangible values. The level of radicalness of this literature depends on how we qualify these reasons.

Academic and operative approaches to biodiversity in a green economy

In reports published by the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES), it is stated that businesses have “an important role to play in the conservation, use and management of biodiversity” (IPBES, 2018, p. 13). However, there are not many incentives in place to make sure that businesses protect biodiversity in their day-to-day operations. An operative approach to biodiversity is difficult to find among scholarly texts on the green economy due to the reasons mentioned previously. To find operative texts in this area, one needs to read texts about firms that are directly affected by the biodiversity. This is here exemplified in texts describing the challenges facing the international fertilizer corporation Yara, and the fish farmer Bremnes Seashore in Norway.

Yara argues in a “position paper” that the loss of productivity if we all went organic would mean that deforestation and the amount of arable land would have to increase significantly, leading to a large increase in GHG emissions (Yara, 2015a). The greatest potential for the increase of agricultural return we need for feeding the growing global population is by increasing productivity in Sub-Saharan Africa and South Asia (Yara, 2015b). Thus, Yara argues that the productivity levels made possible by its fertilizers is what is needed to ensure efficient land use, and thereby minimize deforestation and protect biodiversity. In the fish farm business, we see a similar relationship between business interests and biodiversity. A medium-sized fish farm firm in Norway, Bremnes Seashore, states that the quality of the fish depends on keeping the local seabed and seawater clean and minimizing the escape of salmon from sea cages (Bremnes Seashore, 2020). In general, it is in the interests of fish farmers to avoid any form of contamination of their natural environment because this threatens their productivity and the quality of their products. Thus, even medium-sized fish farm companies may recognize that their business interests are linked to the protection of biodiversity and wild nature.

The textbook on sustainable business practices

The textbook’s chapter seven considered for the master’s course (Farver, 2019) covers the relationship between business and the natural environment. The first part covers the concept of natural capitalism (Hawken et al., 1999), which could be considered a radical perspective on businesses’ role in the green economy. According to Hawken et al. (1999), one of the central strategies of Natural capitalism is to imitate the way nature recycles resources (referred to as “biomimicry”), and by investing to restore natural resources. The second part of chapter seven explains how management in businesses may use environmental codes, indicators, and standards to reduce their negative environmental impact. This part is an operative approach as it describes prac-

tical steps businesses can take to protect their natural environment and protect biodiversity.

SUMMARIZING: THE GAP BETWEEN THE RESEARCH AGENDA AND A WELL-FUNCTIONING SYLLABUS

What do the accounts of the established and radical literature, and the academic and operative knowledge, tell us about how we should design a master course on sustainable business practices? Several chapters in the textbook argue that firms' motive for investing in sustainable practices is the expectation that this will increase their competitive advantage (Farver, 2019, pp. 37–39). Both top- and bottom-line products gain from the improved image through visible investments in sustainability, it is said. And the drivers of a sustainable business do not depend on government pressures or regulations. When US multinationals insisted on investing in sustainable practices even after President Trump pulled the US out of the Paris Climate Agreement, this supports this view, according to Farver (2019, p. 43).

Farver (2019) has also included a number of paragraphs resembling an action-guide:

- on calculating the sustainable footprint (pp. 50–57)
- on estimating the performance level against objectives and strategies (pp. 80–86)
- on determining the appropriate tools for stakeholder engagement (pp. 86–89)
- on selecting sustainability-indicators and reporting schemes (pp. 97–102)
- on designing sustainable strategies (pp. 142–145)
- on establishing a sustainable management system (pp. 152–162)
- on how to read sustainable reports (pp. 190–193)

We see that the textbook is dominated by references to established literature and operative knowledge. But we also see exemptions. In the discussions on energy management, the textbook refers to how businesses should reduce their consumption of electricity. These efforts are more effective the higher in the supply chain they are implemented. This reflects the need for a change in the energy use in the entire supply chain, which is covered by the radical literature. Another exemption from the emphasis on established literature and operative knowledge is the discussions about how businesses can better support a sustainable environment and protect biodiversity. Here the textbook combines a reference to radical literature (Hawken et al., 1999) with an operative approach relying on an established literature (codes of conduct and sustainability indicators).

Thus, the balancing acts – and gaps – related to the textbook (see Table 13.1) tend to be a mix of an established-literature emphasis and an operative-knowledge emphasis. The ambition to introduce the reader to real challenges and to seek solutions in practical guidelines may explain Farver's emphasis on established literature.

How does this inform us when the ideal is to cover both established *and* radical literature, and both academic *and* operative knowledge? A possible answer could be that the identified gaps should define the need for articles supplementing the textbook on the syllabus. Hence, this master's course needs articles supplementing the textbook covering radical literature and academic kinds of knowledge. But an alternative interpretation would be to build on the strengths of the textbook and respond in this way: We should find radical literature and academic knowledge which is linked to the operative emphasis of the textbook. This could be done by asking two questions:

- What operative consequences would the findings in the radical articles suggest, and are these covered by the textbook?
- Do we find support in the literature for the operative guidelines in the textbook?

These questions may guide our selection of the material supplementing the textbook for the master's course. It is not given that the professor should select all the supplementary material. If students were allowed to decide some of the material, in line with general criteria provided by the professor, they would participate in filling the gaps between the textbook and current research, and in balancing different types of literature and knowledge. Being involved in this way should motivate students because they would be able to focus more on the issues that interest them the most, without sacrificing academic or operative relevance.

NOTES

1. The 3R principles originating from the 3R Forum – an international framework in Asia – in 2009. The 3R Forum website: <https://www.env.go.jp/recycle/3r/en/index.html>.
2. This may be adding services to products or substituting the products with services.
3. This is a quote from the then senior vice president for sustainability at Walmart, Matt Kistler.

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