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BUSINESS AND SUSTAINABILITY

Ann-Kristin Bergquist

Introduction

This chapter provides a long-term business history perspective on sustainability. The twentieth century is unique in history, not only because of its enormous technological progress and rise in the standard of living, but because no other century in human history can be compared with the twentieth century for its growth in energy use, depletion of natural resources and an overall growth of problems related to global environmental sustainability (McNeill, 2000; UNEP, 2016). It has often been asserted that industrial capitalism, globalization and multinational companies have been central actors in this development (Wright and Nyberg, 2015).

Business historians have shown how business has driven economic growth since the Industrial Revolution. They have also detailed how firms, especially large manufacturing ones, contributed to the commercialization of new products and processes, which embodied innovative technologies that critically impacted the world economy since the nineteenth century (Chandler et al., 1997; Jones and Zeitlin, 2008). It could be provocatively suggested that business historians have, therefore, documented how business made the world unsustainable (Bergquist, 2019). The creation of modern capitalism was essentially the story of manufacturing firms growing large by employing enormous amounts of fossil fuels: the railroad industry, the oil industry, the electric industry, the chemical industry, the car industry and others are examples. Fossil fuels and natural resource depletion have been crucial components of both the past two centuries of economic expansion, and of today’s current environmental crisis.

It is often assumed among scholars and business practitioners that business challenges related to sustainability are a recent phenomenon. But as business and environmental historians have increasingly shown, ideas and concerns about pollution and nature conservation date back to at least the nineteenth century. A handful of entrepreneurs even then began thinking that pollution prevention, recycling, renewable energy and providing healthy food were their responsibilities (Rosen, 1995; Jones, 2017a; Bergquist and Lindmark, 2016). Incipient steps towards pollution control and creation of green businesses was taken as a first reaction towards industrialization in the late nineteenth and early twentieth centuries, but a much broader and more forceful social movement only emerged in the 1960s. The environmental awakening in the late 1960s mobilized a mass movement, a development of new institutions, including a complex of laws and organizational bodies to protect the environment (Brenton, 1994; Jones, 2017a). Harsh
critique against the business community was coupled with this environmental awakening, initially in the United States (Carroll et al., 2012; Rome, 2017). Environmental regulation emerged as a serious challenge in polluting industries, with operations based in Western countries (Coglianese and Anderson, 2012; Gunningham et al., 2003).

Since the 1960s and 1970s, the issue of business and the environment grew to become broader and much more complex. The Brundtland report in 1987 brought environmental issues into the concept of sustainable development paraphrased as: ‘meeting the needs of the present generation without compromising the ability for future generations to meet their own needs’ (WCED, 1987). In the 2000s, the ‘greening’ label started to morph into ‘sustainability’ and sustainability became translated into business language, such as the ‘triple bottom line’ and ‘eco-efficiency’ and became diffused into virtually every major corporation in the world (Ehrenfeld, 2012; Jones, 2017a). The issue of business and the environment also received increasing attention in academic research from the mid-1980s, including the field of business administration. The development is mirrored in The Oxford Handbook of Business and the Natural Environment (Bansal and Hoffman, 2012), which included 38 overview chapters of different subfields in business strategy, organizational theory, marketing, accounting, international business, finance and other fields.

Business history was for a long time silent about the topic with only a handful of scholars engaged in it. A first call to integrate the natural environment in business history was made in a special issue in Business History Review in 1999 (Rosen and Sellers, 1999). In 2011, the editors of the same journal noticed that business historians had still devoted surprisingly little attention to the environment, and called for an incorporation of sustainability in mainstream business history (Friedman & Jones, 2011). The earliest theme in business historical research, dating to the 1990s, was focused on how business and governments had responded to industrial pollution problems in the nineteenth and the first part of the twentieth century (e.g. Rosen and Sellers, 1999; Rosen, 1995, 2003; Uekötter, 1999, see also Chapter 36 by Stokes and Miller in this volume). Since then, there has been an expansion of research that has covered the period after the 1960s (Bergquist 2019). Existing research does not cover all industries and all different time periods, so the coverage of the literature in this chapter is mainly centred on the Western world. The chapter begins with an overview of the current debate of sustainability and its historical roots, before turning to how business has responded to this challenge over time.

**Business and sustainability: defining the challenge**

The issue of sustainability is deeply rooted in the Industrial Revolution. Before the Industrial Revolution, however, the pre-modern growth conditions were constrained by ecological factors (Pomeranz, 2000; Clark, 2007). The pre-industrial growth was situated in an organic energy regime, based on human and animal muscle power for mechanical power and on wood and other biomass for heat (Wrigley 2010). With the Industrial Revolution, these growth restrictions were crossed when coal replaced firewood and charcoal. The key technology that brought coal into the energy system was the steam engine, which laid the foundation for intensified industrialization, the growth of large firms and exponential economic growth based on fossil fuels.

Core inventions of the Second Industrial Revolution such as electricity, the combustion engine, advances in the chemical industry spurred an economic growth driven by the expansion of big business (Chandler et al., 1997). But this also urged forward further environmental degradations, which from the 1950s onwards began to accelerate tremendously (McNeill and Engelke, 2014). Many natural scientists have suggested that our planet has entered a new geological age, the so-called Anthropocene, as an effect of accumulated human economic activity.
(Steffen et al., 2015). The previous age, the Holocene began 10,000 to 12,000 years ago, when the climate became warmer and much more stable. It is argued that the Anthropocene begins around 1800 with the onset of industrialization, with rapid expansion in the use of fossil fuels being its central feature (Steffen et al., 2007). The 1950s thus mark the beginning of the second stage of the Anthropocene – a stage that has been coined the Great Acceleration. The Anthropocene and Great Acceleration debate essentially draws attention to the explosion of population growth and an unsustainable and exponential energy use after 1945 and its negative impact on the Earth system, most critically climate change, loss of biosphere integrity, land-system change and altered biogeochemical cycles (Steffen et al., 2015). Fossil fuel based capitalism, with its deep roots in the nineteenth and twentieth century, are integrated with this debate (McNeill and Engelke, 2014; Bergquist, 2019). The historical development of carbon dioxide (CO₂) emissions is illustrated in Figure 35.1, and demonstrates the acceleration of these emissions since the 1950s.

The concept of sustainable development has been abundantly debated and, unlike climate change, sustainability and sustainable development did not emerge as a scientific concept (Cohen et al., 1998; Robinson, 2004). In research, the concept of corporate sustainability is still developing (Whiteman et al., 2013) and scholars are debating the usefulness of the concept at the business level (Bergquist et al., 2019). The business historian Geoffrey Jones (2017a) has shown that sustainability should be understood as a concept that has been socially and politically constructed, also by business, and has reflected the interests and values of those entrepreneurs and organizations being involved. For instance, when sustainability became widely translated into business strategies in the 1990s, one critical issue emerged about how to ‘measure’ sustainability, how to evaluate and claim that a business practice or a product is ‘green’ and what criteria should be used to weigh such claims (Jones, 2017a; Robinson, 2004).

![Figure 35.1 Carbon dioxide emissions from fossil fuels, 1751–2007 (tons)](http://example.com/figure35.1.png)

Source: Boden et al. (2017).
Corporate practices in responding to the sustainability challenge, again with climate change as its central issue, involve an understanding of how business has captured and constructed the concept.

**Business and the first wave of environmentalism**

Seen in a long-term perspective, the reaction towards the environmental destruction caused by industrial growth came in two waves (e.g. Guha, 2000; Weber and Soderstrom, 2012; Jones, 2017a). A first wave of environmentalism occurred in the nineteenth century, which came to proceed step-by-step with the Industrial Revolution up until the 1930s. It included anti-pollution movements and the first local anti-pollution legislation in the United States and Western Europe, along with a growing nature conservation movement, which, among other things, triggered the establishment of national parks. The initiatives were at first isolated and sporadic, but gained force as the nineteenth century ended and the evils of polluted cities, industries and impoverished communities generated a fledgling social movements in the United States (Post, 2012: 542) but also in Europe (Rootes, 2004). A second wave of environmentalism emerged in the 1960s but had other characteristics than the first wave. Besides turning into a mass movement, the second wave was based on a dramatic expansion of science and rational models of knowledge about nature as well as the emergence of an anti-establishment and politically left-leaning critique of capitalism after the Second World War. The first wave was primarily a cultural movement with limited mass mobilization and protest capacity to stop the course of industrialization (Weber and Soderstrom, 2012).

Research looking at the forceful impact on the natural environment caused by the industrial capitalism was first driven by environmental historians (Worster, 1979; Cronon, 1991). The seminal work of Worster (1979) delivered a harsh critique of capitalism, which became formative for the subject (Rome, 2017). The one-sided perception of business and capitalism as a dark destructive force turned out to be more complicated and diverse when business historians like Christine Meisner Rosen began to take a closer look into processes ‘inside’ the business community. She demonstrated how business in the late nineteenth century responded with great variety to controlling smoke in industrializing American cities, where some businessmen voluntary committed themselves to smoke abatement and supported regulation, while some actors were engaged in organized resistance to impose controls (Rosen, 1995). The importance of awareness of the variety of business responses among individual entrepreneurs, managers, industries and countries was stressed by Christine Meisner Rosen and Christopher Sellers (1999) when they argued for an ‘ecocultural’ history of business.

**Manufacturing industries**

Technological inventions, such as steam power, and later the electricity and the combustion engine, formed clusters of innovations that not only enabled business corporations to utilize an enormous amount of fossil fuels, metals and wood fibres in production, but also possibilities for firms to grow very large (Chandler, 1990). Along with the rise of modern science, fossil fuel enabled massive increases in productivity through the spread of factory production and economies of scale and scope. This in turn drove global commerce (Jones, 2008), but also environmental degradation to an extent that the world had not experienced before (McNeill, 2000).

The breakthrough of industrial capitalism and the first wave of globalization thus gave rise to very serious negative externalities, and organized local protests, conflicts and even governmental interventions emerged in more seriously damaged areas. One battle was played out in industrial
cities, concerning issues around coal smoke (Uekötter, 2009; Rosen, 1995) and another battle emerged in mining and metals smelting districts (Maysilles, 2011; LeCain, 2000, 2009; Newell, 1997). In the early nineteenth century, the magnitude of conflicts and the level of environmental destruction was most serious in the United States, where large copper corporations, such as the Anaconda Company, came under pressure to control emissions of sulphur and arsenic into the air (LeCain, 2009). New technologies were developed to curb the worst problem and was spread to Europe through business networks (Bergquist and Lindmark, 2016). Studies of the US copper industry (LeCain, 2000) and petroleum industry (Gorman, 1999) show that pollution was basically viewed as an ‘efficiency’ problem. Crude wasted in pipeline leaks was equal to wasted money and sulphur discharged from metal smelter smokestacks was viewed as wasted money as well, as sulphur was a profitable by product. A definition of pollution as an efficiency problem also emerged in the Swedish pulp and paper industry, whose biggest problem at the time was water pollution (Söderholm & Bergquist, 2012). German pulp and paper industry advanced technology to recycle chemicals, triggered both by public complaints over water pollution as well as by cost saving motives (Mutz, 2009).

Although the emissions of pollutants were much lower per produced ton of copper, pulp or crude oil in 1920 than it had been in 1890, the total level of pollution yet continued to increase as the total level of production expanded. However, when the notion of ‘eco-efficiency’ became widespread more than a century later as a new business concept to implement sustainable development (Ehrenfeld, 2012), it was related to the same ideas of efficiency that had appeared many decades earlier. The rationale behind the eco-efficiency concept was simply to produce more value with less environmental impact. There exists a number of examples of how polluting firms were challenged to curb their avalanche environmental impact as the Second Industrial Revolution took hold, but, indeed, it did not change the course of unsustainable development in manufacturing industries.

**Origins of green business**

Business history research has recently shown that in parallel to the growth of manufacturing firms, there were also alternative green businesses active in healthy food and in wind and solar energy. Jones (2017a) has shown that from the mid-nineteenth century to the early twentieth century Europe and the United States saw the emergence of what can be likened to ‘proto-green’ industries created by a cohort of unconventional entrepreneurs. The foundation for future business in healthy and organic food was laid already in the late nineteenth and early twentieth centuries (Jones, 2007a). Also the wind and solar industry originates from entrepreneurial achievements that date back to the late nineteenth century. With further achievements on the technology, wind power for electricity generation came to boom in Denmark during the First World War. The challenge for the wind and solar energy business to grow and scale was, however, overwhelming as long as coal and, later, oil remained cheap, especially during the decades after the Second World War. But, as Jones (2017a) demonstrates, these early ventures laid the basis for technologies, techniques and ideologies which created the foundation for future green large and global firms, such as Whole Foods Market and Vestas.

Household waste in cities has been a well-known nuisance problem since medieval ages, but with industrialization the amount of waste turned into a large-scale challenge. Recycling had already attracted business entrepreneurs in countries, including the United States, Denmark, Germany and Hungary, from the nineteenth century (Jones, 2017a). But by the twentieth century with the rise of mass production and mass consumption, waste became a seriously growing problem, especially in modern cities in the United States and in Europe. Both municipal and
private companies developed to meet the emerging challenges related to the accelerating waste generation (Jones, 2017a: 138–151). Both private and public waste companies played a decisive role in Germany and Britain after the Second World War, when the amount of waste exploded. Besides cleaning up the streets and collecting households’ waste, private and public companies took early responsibility for recycling (Stokes et al., 2013). But the waste business in Germany, Great Britain and the United States developed without having a foundation of environmental belief or great environmental concerns. As in the case of the wind and solar industry, most of these early ventures in the waste and recycling business struggled to achieve profitability without public funds. It was only in the 1960s when environmental considerations began to impact environmental policies towards waste management that it grew into a big, even global, business (Jones, 2017a).

Environmental concerns on hold

The first wave of environmentalism that had emerged as a direct reaction to the consequences of the Industrial Revolution declined in the 1930s. People and governments became occupied with the hardships of the Great Depression and the Second World War and little attention was paid to the effects of a growing population and rapid industrial growth on the environment. After the Second World War, citizens were absorbed by materialism and a careless optimism on the one hand, and the Cold War and the threat of nuclear annihilation on the other (Shabecoff, 2000). Yet new technologies and explosive economic expansion created escalating environmental pressures. As stressed by environmental historians, the postwar period constituted an acceleration of environmental unsustainability compared to previous periods (McNeill and Engelke, 2014). After 1945, the world economy became driven by enormous quantities of fossil fuels – mostly oil. Since the turn of the twentieth century, oil production increased from 20 million tons in 1900 to three billion tons in 1990 (McNeill, 2000). This was reflected in the growth of the number of cars, which increased from around 40 million after 1945 to nearly 700 million by 1996 (Steffen et al., 2007).

The growth in big business was based on fossil fuels and steel. In 1955, the largest corporations in the United States was General Motors, followed by Exxon Mobil, U.S. Steel and General Electric (Fortune 500 database). In the United States, the petroleum industry did not operate free from environmental regulatory constraints, but was not really challenged by them either. Many efforts to increase the efficiency with which companies extracted, transported and refined petroleum did overlap with efforts to address pollution concerns (Gorman, 2001: 269). Between the end of the Second World War and the 1960s, the German industry was not under much pressure either. The German legal system formally prioritized economic performance over protection of victims of pollution (Jones and Lubinski, 2014). Environmental concerns and pressure on industry was also on hold in the Scandinavian countries. In Sweden, who had had a serious parliamentary debate about enforcing an extensive industrial pollution control system in the early 1900s, shelved the initiative in the 1920s (Bergquist and Lindmark, 2016) and the issue did not return as a serious concern to industry or the government before the 1960s (Söderholm and Bergquist 2012). A first wake-up call that things were getting out of control, at least in Europe, came with the Great Smog in London in 1952. The first European international convention concerning air pollution was held in Milan in 1957 (Bergquist, 2017).

Although the anti-pollution and nature conservation movement became subdued in the 1930s, entrepreneurs in organic food were still active, if marginal, in countries like Britain, Germany and the United States. In 1959 the retail shop Wholefood, was opened in London. But this particular business and equivalent ventures remained niche businesses (Jones, 2017a).
Barber (2016) moreover shows that solar heating experiments in buildings were undertaken in the United States between 1939 and 1949, but as the war restrictions reduced and oil became cheaper, investments in solar heating waned. The corporations and governments around the world were by the 1960s heavily invested in a present and future empowered by oil and there was a rapid loss of sustainability in both the United States and the rest of world (Barber, 2016: 205).

A more radical and popular debate started, however, in the United States, with the publication of Rachel Carson’s book *Silent Spring* (1962). Carson was a skilful writer and popularized the existing knowledge of the dangers of indiscriminate use of pesticides in agriculture. It was the beginning of an explosion of popular literature reflecting new scientific knowledge about invisible threats in the environment: radiation, heavy metal waste and other problems. The first mass movement for environmental protection thus started in the United States and focused on domestic issues (Porter and Brown, 1996) but other countries had their own debates in the 1960s. Political and public concern about air, soil and water pollution started overall to occur in non-communist industrial countries. In 1967, the Organisation for Economic Co-operations and Development (OECD) established advisory groups for different environmental problems, among them auto exhaust emissions, and environmental impact from sulphur products and detergents. The list of issues that the OECD found urgent, were extended every year after 1967 (Long, 2000). The second wave of environmentalism was on rise.

**Business and the second wave of environmentalism**

An extensive academic literature has covered the rise of environmentalism in the 1960s and the early 1970s. A complex of many factors came to lay the foundation of the adoption of the sustainability concept in the 1990s. The publication of *Silent Spring*, the United Nations Conference on the Human Environment held in Stockholm in 1972, the Arab Oil Embargo in 1973 along with publication of the book *Limits of Growth* (Meadows et al., 1972) by the Club of Rome in 1972 have been widely seen as core formative events. Devastating environmental catastrophes caused by corporations in the 1970s and the 1980s, most notably the Bhopal catastrophe in 1984 and Exxon Valdez oil spill in 1989, also raised new levels of pressure on business, especially on multinationals. This interplayed with scientific findings regarding the impact of different pollutants causing acid rain, ozone depletion, eutrophication, mercury intoxication and eventually climate change and a wide range of other issues. There was an outbreak of new non-governmental organizations (NGOs), governmental institutions and national and supranational legislation from the late 1960s and the 1970s, which came to impact business in several ways (Coglianese and Anderson, 2012; Weber and Soderstrom, 2012). The impact of this historical shift has only recently started to be given broader coverage in the business history literature (Jones, 2017a; Berghoff and Rome, 2017; Bergquist, 2019).

**Corporate environmentalism**

The 1960s was a period when corporations started to grow their environmental awareness. In the United States, public attention and criticism was directed towards the chemical industry, automobile emissions and oil spills. Attention to environmental issues increased in Europe as well (Andersen and Liefferink, 1997). Japan had its own debate in the 1960s centred on the disaster in Minamata, where mercury emissions from Japan’s leading petrochemical manufacturer Chisso Corporation caused the deaths of an estimated 1,000 Japanese citizens (Almeida and Brewster Stearns, 1998).
The management scholar Andrew J. Hoffman’s work (Hoffman, 1997) on the US history of corporate environmentalism has been frequently cited to describe different modes of business responses to the environmental issue from the 1960s. Hoffman identified a movement along an evolutionary adaptive learning process forming specific attitudes or modes of business responses during certain sub-periods.

According to Hoffman and Bansal’s (2012) periodization (Figure 35.2) corporate environmentalism in the 1960s and 1970s embraced the recognition that corporate environmental issues are a problem that necessitated regulatory control, and business responded with a strategy of regulatory compliance. In the 1980s and the early 1990s, business adopted a more proactive and strategic approach, which was a response to, among other things, a number of devastating catastrophic events, such as the Bhopal catastrophe in 1984. A third wave of corporate environmentalism, then came to embrace the concept of sustainability. This shift begun in the latter part of the twenty-first century and came to focus on the merger of environmental and social issues with the global economy. The shift was driven by a series of events and issues that had forced an expansion of the scope of environmentalism to include considerations for a restructuring of global economies (Hoffman and Bansal, 2012: 7–9). The most important issue for business in the third wave was, and still is, climate change.

Hoffman’s seminal framework (1997) covering the period from the 1960s to the late 1990s is based on empirical studies of the US chemical and petroleum industry, which responded reactively and defensively to environmental regulations in the 1970s. This view has also been supported by business historical studies such as Archie B. Carroll et al. (2012) who have argued that most American companies were resisting environmental regulations in the 1970s along with delaying investments as long as possible. Only a minor number of American executives perceived that they had major responsibility towards the natural environment (Carroll et al., 2012: 254–255). Results from McCarthy’s (2007: 190) research on the environment and US car industry also supports this view.

![Figure 35.2 Waves of corporate environmentalism, 1960–2010](image_url)

*Source: Hoffman and Bansal (2012: 5).*
Business history research gives no clear and coherent picture of how manufacturing companies responded to the new complex of environmental issues emerging since the 1960s. The way national polices shaped business strategies to manage growing environmental concerns is likewise uncertain. Boulett (2006) has explored the development of modes of corporate responses to the environmental issues in the French industry 1950–1990 and identified three stages of business behaviour: inattention, adaptation and integration. Inattention dominated until the end of the 1950s, but, in the 1970s, specific adaptive behaviours were progressively gaining momentum, often as a result of public action. The scope of this initial dynamic was mostly national, but this trend was reinforced after 1979 by external forces, such as European regulation and internationalization. Growing signs of integration into management practices can be found in the second half of the 1980s. Boulett stresses, however, that not all corporations have gone through these stages at the same rate and that the large French corporations adopted various attitudes depending on, among other things, specific geographical contexts.

Jones and Lubinski (2014) have explored the development of environmental strategies in the German chemical industry from the 1950s to the 1980s and found that it diverged from their American counterparts in the 1970s by acting proactively and using public relations strategies not only to contain fallout from criticism, but also as opportunities for changes in corporate culture. This reflected not only the broader emergence of environmental issues in German society and government, but also the fact that the pro-active strategy was driven by geographical circumstances.

In exploring the development of environmental strategies and clean technology development in the Swedish pulp and paper industry, Bergquist and Söderholm (2011, 2015) stressed the importance of factors beyond firm boundaries, and how different styles of national regulations may lead to different corporate responses to environmental challenges. They argued that in the Swedish case, the cooperative and flexible style in Swedish environmental policies helps to explain why and how Swedish pulp and paper took a world leadership in developing cleaner technologies in the 1970s and the 1980s. Challenges in creating effective public policies that incentivize or force companies to undertake efficient measures is discussed in recent business history research by Halvorson (2019), who explored the business and government relations and the new deregulation policies emerging in the United States in the late 1970s. Müller (2019) has also demonstrated how loopholes in US public policies enabled companies to externalize their environmental costs to markets in the global South in the 1970s and the 1980s.

International business scholars have stressed that the interactions between governmental environmental policy and the strategies of multinationals have been much more complex than equivalent business–government interactions at the national level. From the 1960s, environmental policies diverged across countries, and multinationals have had to comply with different national jurisdictions (Rugman and Verbeke, 1998). The impact of such complexities has been clearly demonstrated by Jones’ (2005) history of Unilever between 1965 and 1990. Unilever experienced increased environmental pressure already starting in the 1960s, but remained reactive towards the environmental issue in the 1970s and the 1980s. Its highly diversified nature handicapped the development of a strong corporate-wide environmental strategy. Another complicating factor was that the company had to struggle with figuring out what to do in different legal jurisdictions and countries with lower level of incomes (Jones, 2005: 342–347).

Sluyterman’s study of Royal Dutch Shell (Sluyterman, 2010, 2007: 303–365) provides an example of the devastating costs to reputation that followed the company’s inability to meet the social and environmental expectations from its stakeholders. Shell’s presence in South Africa, the planned sinking of the Brent Spar in the North Atlantic Sea in the early 1990s along with the environmental and human rights concern in Nigeria, contributed to a situation in which
Shell’s reputation and legitimacy eroded. This resulted in a situation when the company seriously had to rethink the company’s ethics, values and coordination to be able to meet the emerging complex challenge related to sustainability.

There is still no comprehensive business history account of how the environmental issue challenged business corporations from the 1960s, although there was a dramatic expansion in the scope, volume and detail of, for instance, environmental law during the past decades. The dominant research stream in international business literature on sustainable development has not focused much on challenges and business responses at the firm level, as the dominant research stream has been of macro-economic and quantitative nature (Van Tulder et al., 2014).

**Sustainability as mainstream business**

In the 1990s, capitalism was getting redefined as an agent capable of meeting the world’s needs. This was a big shift from the discourse of the 1970s. A number of different industries, even oil and gas, which had been resisting environmental regulations in the 1970s, declared that they now had reached the point when the ongoing degradation of the environment had to be dealt with urgently, including climate change. Sustainability suddenly emerged as something that was compatible with profits and something that could enhance value also in large multinational corporations. Carroll et al. (2012: 349.) suggest that this happened as global competition increased in the 1990s, and companies’ international images and brand reputation became more vulnerable. European oil companies came out in support of the Kyoto Protocol in 1997 and formulated proactive climate strategies (Boon, 2019). In 2000, British Petroleum embarked on a massive $200 million campaign to position itself as a leading environmental and safety company with the slogan ‘Beyond Petroleum’ (Gendron et al., 2017). Two years later the presidents of DuPont, Anova Holding AG and the Royal Dutch Shell published the book *Walking the Talk: The Business Case for Sustainable Development*, and argued that they were now more convinced than ever that companies can do themselves good through doing the right for society at large and the environment (Holliday et al., 2002: 8).

Jones (2017a) suggests a number of overlapping factors that help to explain why mainstreaming of sustainability in business happened. First of all, the environmental issue became redefined under the category of sustainability by the Brundtland report in 1987. As the concept of sustainability merged both social issues and economic growth, it was compatible with large corporations. Second, the sustainability concepts were made readily adaptable to firms by arguments, definitions, certifications and metrics developed by leaders of green thought such as John Elkington (1997) and Paul Hawken (1993; see also Rome, 2017). A third factor contributing to the mainstreaming of sustainability was the growing market preferences for greener products in the 1990s. Large corporations from food and beauty to energy companies needed to gain value from green reputations. A fourth factor that was some businesses, like the re-insurance industry, faced a serious future threat from global warming, because they were directly exposed to underwriting climate-related risks (Haueter and Jones, 2017). A fifth factor has to do with a shift in government policies, and new regulatory tools that reduced financial barriers of investing in sustainability, such as renewable energy and organic food. Finally, a sixth factor was related to the new and powerful role of NGOs. The growing number of NGOs got increasing opportunities to expose poor environmental practices, but they also provided institutional capacity to enhance big business reputations through partnerships. Corporations could, for instance, use NGOs for product certifications and to form alliances involving matters such as supply chain management (Jones, 2017a, 360–363). One of many examples is the Swedish furniture company IKEA who in 2007 partnered with the World Wildlife Fund (Strand, 2009).
One striking feature in global business from the 1990s was the megatrend of business, voluntary action to protect the environment. This development has been perceived as a reflection of the new role played by various sets of stakeholders who expected global firms to take responsibility for sustainability issues, especially multinational companies due to their enormous power. Customers, investors, consumers, NGOs and other stakeholders demanded ‘facts’, not only a green rhetoric. Large corporations in the 1990s began issuing sustainability reports alongside their business reports (Berghoff, 2017). An array of codes, standards, guidelines and frameworks were developed to guide companies in integrating sustainability and corporate social responsibility into their business strategies and management processes. The development was explosive, and more than 300 global corporate standards could be identified in the early 2000s, each with its own history and criteria (Marimon et al., 2012). In 1996, the International Organization for Standardization (ISO), launched the environmental management system, ISO 14001, and already in 2002, the system had been adopted by nearly 50,000 facilities in 118 countries (Prakash and Potoski, 2006: 25).

Another matrix, the Global Reporting Initiative (GRI) was created in 1997 under the initiative of the non-profit organization North American Coalition for Environmentally Sustainable Economies (CERES), with the United Nations Environmental Programme as a joint partner from 1999. The Triple Bottom Line concept, which had been launched by John Elkington (1997) in the early 1990s, laid the foundation for the GRI, a framework for principles for environmental, social and sustainability reporting (Gray and Harremans, 2012: 410; Jones, 2017a). The purpose of the GRI was to enable the diffusion of sustainability records and to provide information guidelines to present a clearer vision of the human and ecological impacts, not the least from large enterprises (Marimon et al., 2012). During the first year (1999) 12 large corporations joined the GRI, among them the US based General Motors, Procter & Gamble and Acea, and the UK based British Airways, the Japanese Panasonic Corporation and the Swedish SCA and Electrolux. The number of firms that had been listed in 1999 (12), had increased to over 6,000 in 2016 (GRI Database, 2017).

The origins and growth of these new ‘green institutions’, such as green certification which came to lay the foundation of the expansion of green business markets, has been explored by Jones (2017a). The aim with certification was essentially to define what sustainability was in different contexts. Even though certification has been fundamental to the creation and expansion of green markets, the creation of certifications and new accounting principles also provided metrics that enabled big business to demonstrate publicly that it was becoming sustainable. Certification, environmental reporting and green-washing also made the boundaries of the concept of sustainability so wide that any corporation, even oil companies, could be engaged in it (Jones, 2017a: 233–262, 379).

Scholars have raised great concerns whether certifications and new metrics are accurate signals of firms’ environmental conduct, and that future research should pay much more attention to firms’ actual outcomes. The literature covering the outcomes from multinational corporations’ adoption of sustainability policies is still scarce (Christmann and Taylor, 2012; Van Tulder et al., 2014) and it is difficult to conclude to what degree this global trend has delivered meaningful results (Bergquist et al., 2019). It also appears as if the trend has mostly concerned multinational companies based in Western countries. A recent overview covering the business history of emerging markets (Austin et al., 2017) gives no evidence that the same mainstreaming of sustainability happened in large corporations based in Latin America or in Asia.
The scaling of green business

Climate change and other issues of sustainability will require, as it has been stated, a future ‘green growth’ transition that needs to be large, system-wide and structural, in other words, a new industrial revolution based on renewable energy (Bowen et al., 2016). Business history research has pointed at the historical circumstances that prevented growth in the renewable energy industry, and perhaps, even more importantly, it has pointed at what kind of factors supported its expansion.

Jones’ (2017a, 2017b) research on the origin and stepwise scaling of the wind and solar industry contributes with important insights about several important factors that obstructed its growth over the past century. The history of wind and solar power companies shows in its essence the great difficulties that entrepreneurs faced in raising the amount of capital needed to finance innovation and compete with fossil fuels and nuclear energy before the 1980s. The reason why the world has seen a considerable growth in the solar and wind industry, as well as in the waste-to-energy and recycling business, is the crucial policy shift which emerged among some governments in the 1980s. Subsidies and tax incentives came to help companies to compete with fossil fuels, as they could afford innovation and, more importantly, to scale up their businesses. Thus Jones (2017a) argues that clustering of the wind power industry in Denmark can largely be explained by a functioning governmental policy to support its growth. Likewise, the fluctuating public policies in the United States helps to explain why the leadership in wind and solar technologies faltered, giving the opportunity for Europe and then China to take a leadership position.

The business of organic food and drink has expanded from being marginal small businesses in the 1980s into a global industry in the 2000s (Jones, 2017a, 2018). The market growth in consumption of organic food as well as organic agriculture shows, however, wide geographical variations (Jones and Mowatt, 2016). In the United States, organic food production expanded from the 1980s in California, while in Europe it was most evident in Germany, Switzerland and Denmark. However, when the production globalized from the 1980s, there was, as Jones (2017a) shows, an increasing divorce between production and consumption of organic food, which raised new environmental concerns regarding increasing carbon footprint of the industry because of long-distance trade. One example is the American-based Whole Foods Market, founded in 1980, that sourced organic food on an industrial scale from different parts of the world as the company scaled in the US market. The largest regional source of organic food production was, in 2014, located in Australia and the Pacific Islands (Jones, 2017a:176–201), while the major organic tea growing nations were found in South Asia, East Africa and China (Jones, 2018).

One of the more unsustainable global industries with a considerable growth in recent decades is international tourism. From the 1980s it has expanded from 200 million international tourist arrivals to more than one billion arrivals each year since 2010 and exerts an enormous pressure on the environment (Mowforth and Munt, 2015). Business history research has covered how eco-tourism emerged as an important alternative business sector from the 1990s (Jones, 2017a) with one important cluster developed in Costa Rica (see also Chapter 17 by Giacomin in this volume). The growth of the eco-tourism industry represents not only an illustrating case of green business clustering, but also problems related to green-washing. As Jones and Spadafora (2017) demonstrate in their study of Costa Rica, the problem with green-washing emerged when other businesses sought to take advantage to free ride on the national image that had been created there. Overall, once the global eco-tourism market had been proven, conventional firms sought to enter the business segment.
The threat of green-washing represents a general problem in the scaling of green business. When conventional industries entered the green market segment, it involved a complex of problems around green-washing and social constructions of sustainability. In the 1990s, large conventional corporations started to acquire visionary green firms to enhance a greener brand value. This meant that many green firms came to be reduced to only one component inside global corporations, co-existing with environmentally damaging activities (Jones, 2017a).

The world has not seen a decline in global environmental challenges in the past decades, in fact the opposite. One structural aspect raised as a roadblock to sustainability is shareholder capitalism developed from the 1980s, which have provided a constant incentive for firms to take decisions focused on short-term returns (Wright and Nyberg, 2015). Indeed, as recent business history research has proven, quarterly capitalism is not aligned with the long-term investment horizons needed for green business either (Jones, 2017a).

Conclusions

Fossil fuel laid the foundation of Western industrial capitalism and its success. The creation of modern capitalism and big business was essentially the story of manufacturing firms growing large by employing enormous amounts of fossil fuels. Business historians have spent generations exploring that story, and the question why some countries and firms proved more successful in building capitalist enterprise than others. However, today’s debates around sustainability are about moving beyond this past focus. There now exists, after a lag, a growing stream of research on the environmental consequences of capitalist growth.

As this chapter has shown, this growing new research has two dimensions. The earliest theme to be explored, in literature dating from the 1990s, is the story of when, how and why some conventional industries sought to become less polluting. This stream of research has dated this phenomenon back to the late nineteenth century, showed that it gained momentum and complexity from the 1960s, and resulted in a mainstreaming of sustainability rhetoric, and sometimes practice, in large corporations from the 1980s, primarily in Western developed countries. Scholars have explored business responses to a wide set of environmental issues, including public pressure, environmental regulations and technological challenges, both in different industries and geographical contexts.

A more recent stream of research is the story of how for-profit entrepreneurs developed entire new product categories such as organic food, and wind and solar energy, which were explicitly focused on sustainability. Again this process has been traced back to the nineteenth century. The process has been explored in different industries and geographies, and it has been shown to have laid the technological and intellectual basis for a range of today’s green businesses, even if these early green entrepreneurs were rarely able to build scalable businesses before the 1980s. With the rise in green consumerism and public policy support in some Western countries for sustainability during the 1990s, the two historical trends met, as the concept of sustainable development spread to large conventional corporations and green business firms scaled or were acquired by conventional big businesses.

Business history research has further demonstrated that a major barrier to sustainability emerged in the 1990s as the very concept of sustainability became socially constructed in a sufficiently broad fashion as to permit even firms in the most unsustainable industries to be certified and win awards for being sustainable. At the same time, those environmental improvements made in large corporations, not the least heavy polluting industries, should not neglected.

The issue of sustainability has become a mainstream topic in business administration research with a growing number of subfields devoted to the issue. Future business history research needs
to be more fully incorporated in these debates by researching what historically shaped factors have facilitated or blocked businesses committing themselves to change their direction towards an environmentally sustainable value creation. One issue to delve into is simply why it has been so difficult for both green entrepreneurs as well as large multinational corporations to live up to their green visions, even when they have had the best intentions. Business historians have to pay attention not only to barriers founded in organizational and technological inertias, but also to the very rules of the market economy and the role of governments. The concept of sustainability, and how it has been translated into business practice, also calls for a specific historical scrutiny, as it appears that the concept has been used to avoid costly, but necessary, actions to protect the environment (Bergquist et al., 2019).

Since the 1960s, corporations have faced increasing criticism from a range of stakeholders over environmental problems caused by economic growth, but yet global environmental challenges are not decreasing: in fact the opposite. Subfields within science have also become increasingly focused on the historical dynamics of capitalism, centred on the Great Acceleration and Anthropocene debates, which have engaged scholarly work by environmental historians. Today no other issue dominates the concerns about sustainability more than climate change, and the issue cuts across not only virtually all industries but also the whole global economy. It is thus a matter of urgency to make issues of sustainability – and “unsustainability” – a mainstream topic in business history, as business historians have unique skills to contribute with important knowledge about the grandest challenge of our time.

Note
1 In 2016 the United Nations presented its most authoritative study ever published – the ‘Global Environmental Outlook (GEO-6): Regional Assessments’ report – on the state of the planet’s health, which concluded that the environment is deteriorating even faster than previously thought.

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Ann-Kristin Bergquist


