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The roles and responsibilities of business in sustainability

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**Inaugural lecture:
Prof.dr. Arno Kourula, Professor of Business & Sustainability**

Mister Rector Magnificus, Mister Dean, dear audience, rakas perheeni,

Today is a hopeful day. Because today is the winter solstice in the Northern Hemisphere, every day from now on will be a bit brighter than the previous one. When you come from the North of the Northern Hemisphere, a place like Finland as I do, this is a big deal. The topic of my inaugural lecture is about sustainability and, as I come from the business school, the roles and responsibilities of business in sustainability. When we speak of sustainability, many grand societal challenges come to mind, ranging from the climate crisis to the loss of biodiversity and from human rights violations in global business to the ethical future of artificial intelligence.

To start on the lighter side of things, I have two trivia questions for you. First, why do we button our shirts in the way we do, meaning the left side over the right? According to a dominant theory (there are many theories by the way) on the origins of this behavior, I am likely to be right handed, I draw my sword from the left side, and I don't want my sword to get caught in my shirt or jacket. When I said "we" you may have noticed that I automatically meant men, as women button their shirts the other way around. The prevalent theory says that aristocratic women did not use to dress themselves but used to be dressed. Thus buttons were the other way around to make it easier for servants. The reason I raise such a mundane example, is as a reminder that we need to know the history, underlying assumptions and reasons of our behavior and even simplest technologies to understand where we are going. Much of my research on sustainability has aimed to do just that.

My second trivia question is: Which company manufactures annually the largest number of tires in the world? Tires are needed for cars, trucks and different forms of transport. Companies such as Michelin, Bridgestone, or Goodyear may come to mind. Well, the answer is the Danish company Lego and by a very large margin. The reason I raise this trivial question is as a reminder that we need to approach creatively the way organize around and for sustainability as well as understand the broader perspective. In discussing business roles and responsibilities in sustainability, I will start with this broader picture. I'll assess where we are today in terms of the broader sustainability challenges, provide four key insights that my and my collaborators research adds to our understanding of business roles and responsibilities, and conclude by thanking and celebrating everyone without whose support I would not be here.

Speaking of history, it's important to note that sustainability in its modern form has a long history. For example, the German tax accountant Hans Carl von Carlowitz said: "We must aim for a continuous, resilient, and sustainable use" in this case of forests (Caradonna, 2014). He said this in 1713. More recently, over 1,700 scientists, including the majority of living Nobel laureates in the sciences, published a serious warning about major environmental trends taking place. They said: "Human beings and the natural world are on a collision course" (Union of Concerned Scientists, 1992). This was in 1992. In the three decades that have passed since this warning from scientists, were we able to answer the call? The answer is "not really". Due to limited progress, can we still say that today is a hopeful day?

Let us return to a classic image: a picture of the Earth taken from the moon's orbit in 1968. The picture is called Earthrise (see, <https://en.wikipedia.org/wiki/Earthrise>), as the Earth rises from the horizon of the moon. This was an important picture for the environmental movement as it gave us perspective. It allows for reflection about the interconnectedness of all our ecological, social and

economic systems. Scientists have now started calling the current epoch the Anthropocene, “Anthropo” meaning human thus making this the “age of humans” due to our impacts on the planet. Our entire human civilization has developed in a remarkably stable geological period called the Holocene and we have now come to a time where humans have a quite significant impact on the planet. Let’s remind ourselves of some key trends related to our impact on the planet:

- There are 8 billion of us on earth. When I was born, we were 4.3 billion. When my grandmother was born, she is turning 99 in February, we had 1.9 billion people on the planet. While population growth has been very rapid, in itself this is not the problem. The environmental impacts of individuals varies widely as the world’s richest 1% owns 45.6% of world’s wealth (Credit Suisse Global Wealth Report, 2022).
- We have changed the atmosphere: We are at 421 ppm of CO₂ in atmosphere (climate.gov, 2022). This is the highest in about two million years. When I was born we were at around 337 ppm of CO₂ in atmosphere.
- We have changed the surface of our planet: After agriculture, deforestation, mining and urbanization, less than 3% of land on earth is ecologically intact (Plumptre et al. 2021).
- We have built many things: We are now in a situation where all human-made mass (meaning our buildings, cars, phones, chairs, etc.) is estimated to exceed all living biomass (meaning all living things such as plants, bacteria, animals, including of course humans) (Elhacham et al. 2020).
- Our global economy consumes over 100 billion tons of materials a year and wastes over 90%. We are estimated to be 8.6% circular which means there is a lots of possibilities for material efficiency, especially since many material stocks are depleting. (Circle Economy 2022)
- In terms of life on land and in water, we see rapid ecosystem deterioration and species extinction. Natural scientists call this the sixth age of extinction, the previous taking place about 66 million years ago when most dinosaurs were wiped. All in all, population sizes of monitored mammals, fish, birds, reptiles and amphibians have declined an average of 68% since 1970 (Living Planet Index, 2020; Dasgupta, 2021). As we encroach on the natural habitats of animals, we will see more zoonotic diseases, meaning diseases transmitted from animals to humans.
- Finally, we live in circular systems. If I were to catch a fish in the sea, for example in the Mediterranean especially close to cities, I am likely to find traces of estrogen, ibuprofen and caffeine in this fish. Anything that goes into our bodies, also comes out.

All things considered, while we as humans are small, we have a rather large influence on the planet. What we have is a range of trends that look like hockey sticks. Since I am from Finland, I have to speak of hockey at some point. This has been called the Great Acceleration. On the left side, we see key socio-economic trends (see Steffen et al. 2015). As world population has more than quadrupled in the past century, we see many positive developments. In the last century, the world economy has increased by a factor of 80. Average life expectancy has more than doubled. The share of people living in extreme poverty dropped by a factor of 8. Literacy rates more than quadrupled. And we have seen astonishing developments in science and technology. In this sense, today is a hopeful day. But, as we see on the right, this has come at an environmental cost to our climate, biodiversity and ecosystems. And these environmental challenges are deeply intertwined with the social challenges we still face. We get a good sense of why especially our younger generations are very worried.

A useful visualization of these costs are the so-called planetary boundaries (see Rockström et al. 2009; Steffen et al. 2015). This academic framework, developed by several natural scientists, among the lead authors an honorary doctor of the University of Amsterdam, aims to describe what is the safe operating space for humanity. Each slice of the cake is an environmental area critical to the

functioning of earth systems. If we are within the circle in the middle, meaning within the green, we are operating within the threshold levels of what natural science considers as safe. And we have seen important successes in areas such as ozone depletion. However, we are way beyond the safe operating space for chemical pollution, nitrogen and phosphorus flows, deforestation, biodiversity, and climate change. Think of this as a management dashboard or the key performance indicators of the planet, as Professor Gail Whiteman refers to them.

Let's dive into one of these key challenges: Our current climate crisis. We have very solid scientific evidence of the trends such as the rising temperature of the planet, rising sea levels and decrease in sea ice (IPCC, 2021). We know that we as humans are the primary cause as our carbon dioxide and other greenhouse gas emissions trap heat within the atmosphere. We know that, even if the graphs may look like it, climate related systems are not linear in nature and there are interconnected tipping points which can cause larger climactic shifts (Lenton et al. 2019). We know that there are huge climate justice issues in terms of who has historically caused the changing climate, who is currently emitting greenhouse gases and who is actually responsible for current emissions, meaning whose consumption is driving further climate change. We know that certain high income groups within and across countries are disproportionately responsible for emissions. The right side of the graph shows the proportion of each income group within the population and the left side their proportion of total emissions. The top 10% owners of wealth emit 47% of global greenhouse gases (Bruckner et al. 2022). Finally, we know that time is of the essence.

What are we doing about all these challenges. Various stakeholder came together at the United Nations and decided the 17 goals that humanity should have and 169 targets that we would need to achieve by 2030. These goals range from the environmental ones we have talked about, combined with social goals such as poverty reduction and gender equality, and economic ones such as decent work and economic growth. Basically, we know what the problems are and we know what we should do. Keeping in mind that there will be some important tradeoffs and tensions. This already should bring us hope for today. Now, let's see how all these goals are interconnected.

We are currently seeing six broader transformations take place (Sachs et al., 2019). Each of these involves major changes in economic, political, technological and social structures. These six transformations are:

1. Education, gender and inequality: Educational institutions will form the backbone as we rethink future social safety nets in a way that leaves no one behind.
2. Health, well-being and demography: As we see wide demographic shifts, changing social norms will be combined with innovative public health systems integrating prevention, therapeutic and palliative services.
3. Energy decarbonization and sustainable industry: We need to rapidly decarbonize the energy system, provide access to energy to all globally, have rapid electrification within our homes and in industry, and move towards a more circular economy.
4. Sustainable food, land, water and oceans: we need healthier and more sustainable diets, more sustainable food systems, and conservation of ecosystems. Ultimately nearly a third of all food produced each year is lost or wasted.
5. Sustainable cities and communities: Humanity is now 55% urban and it will be 70% urban by 2050. This will involve huge steps in access to water, sustainable mobility, and resource efficiency.
6. Digital revolution for sustainable development: We are experiencing the so-called Fourth Industrial Revolution with artificial intelligence and other technologies. This involves precision agriculture, autonomous vehicles, robotics, social networks, e-commerce, diagnostics, online learning, e-governance, and many more. Keep in mind that the Internet alone uses about 10 per cent of world electricity, while only mining Bitcoin uses annually

more electricity than the amount used by the entire country of Finland, my home country (Kim 2021).

Let's then turn to my personal research puzzle, understanding where business fits into this broader picture. The broader question that has driven my research is the following: why and how do businesses adopt different roles and responsibilities in sustainability? As you notice, this type of "why and how" question involves deep qualitative engagement with both business and its stakeholders. It necessitates exploring the underlying assumptions and broader perspective that were mentioned in the opening anecdotes and trivia questions. My focus has been on specific sustainability contexts and goals listed on the right: poverty reduction, energy, sustainable cities, responsible consumption, climate change, and partnerships between businesses, governments and civil society.

As academics, we of course have to define the key terms that we use. This is how my co-authors and I have defined corporate sustainability: "Corporate sustainability focuses on managing and balancing an enterprise's embeddedness in interrelated ecological, social, and economic systems so that positive impact is created in the form of long-term ecological balance, societal welfare, and stakeholder value." This definition is from our book coming out in March 2023 (Rasche, Moon, Morsing & Kourula 2023). On the slide, you see the cover of our book which I really love. The picture is from Place de la Concorde in Paris, a place which is full of history as the site of both bloody revolutions and social progress. The deer, which of course seems out of place in this scene, represents the natural environment staring at the reader. Back to the theme: Sustainability has become ubiquitous in the business world. For example, globally around 36% of all assets under management are sustainable investment assets (GSIA, 2022) and 96% of the world's largest 250 companies in the world produce extensive sustainability reports (KPMG 2022).

However, there have historically been some key tensions that have prevailed in the discourse and practice of corporate sustainability (see Table 26.3 from Rasche et al. 2023)

- Short-term vs. long-term: Do firms focus on short-term gain or long-term impact?
- Shareholder vs. stakeholder: Do firms exist for shareholder value maximization or for the benefit of a broader set of constituents?
- Marginal vs. core: How core to business strategy are sustainability issues for businesses in achieving their aims?
- Voluntary vs. mandatory: Is corporate sustainability a voluntary action or a mandatory compliance issue where it is integrated into the institutional structures?
- Organizational vs. interorganizational: Should companies focus on integrating sustainability into their own operations or emphasize industry transformation?
- Competitive vs. collaborative: Is the key to sustainability competition or collaboration?
- Global vs. local: Should companies focus sustainability efforts in a globally standardized way or in a locally adapted one?
- Profit vs. triple bottom line: Do firms focus (primarily) on financial profit or on the so-called triple bottom line of economic, environmental and social (or "People, planet, profit" or "Economy, ecology, equity")?

In terms of the latter, the field of corporate sustainability has largely moved from seeing economic, social and environmental aspects as distinct buckets towards seeing economic systems embedded in social systems, which in turn operate within planetary boundaries.

In reviewing insights from my own and co-authors research on business and sustainability, I want to touch upon four themes: 1) Context as key in sustainability, 2) Systems as a foundation, 3)

Dynamism as a phenomenon, and 4) the dark side as an impact. Basically I will show how research can help us understand the broader picture of sustainability changes and related outcomes in context. What you will quickly see is that all of these are inspired by research across traditional academic disciplines. The extensive background I provided was largely based on earth system sciences. The first point about context is inspired by a combination of international business and anthropology-inspired methodologies as well as insights from applied ethics. The second one emerged from combining mixed methods from social sciences with engineering contexts. The third insight comes from management studies engaging with policy and political sciences as well as environmental studies. The fourth and final one also uses insights from political science and sociology to bring novel contributions to management studies. Since I come from business and management studies, the underlying theme will be related to how we organize around and for sustainability.

Context is key. The map I am showing indicates the locations of research sites, university visits, conferences and executive education engagements from my academic career. While I have been based in Europe and the United States, I have aimed to have a global perspective. Context in my case means the national context, the city context, the industry context, and the organizational context. As I started out as a scholar of international business, my first studies looked at how a multinational firm operating in Finland, Poland, Russia, Brazil and China engaged with stakeholders in different contexts (Kourula, 2010). Here I developed tools to measure different stakeholder environments in a comparative way. Since then, my colleagues and I have worked with cities such as Amsterdam to try to understand the local roots and challenges of sustainability innovation. I have also examined the corporate sustainability policies and practices of companies in industries as varied as information and communication technology, forestry, fashion, retail and energy (see Lauesen et al. 2017; Peterman et al. 2012). Sustainability is not only an issue for large firms as our research has explored sustainability perspectives of governments and ministries (Kourula et al. 2019; Peterman et al. 2014), municipalities and communities, social enterprises and grassroots organizations (Chowdhury et al. 2021). The picture on the slide is an example from a larger research project on circular economy practices in low income contexts (Korsunova et al. 2022). Our recent research argues that, while these grand societal challenges may feel distant and too large, necessitating technological silver bullets, they are essentially ethical questions where more “humble” solutions are also critical. As you can imagine, the types of approaches and the related contestations and tensions will be different whether we are talking of Copenhagen, Cairo or Caracas. All things considered, as our recent reviews indicate (Pisani et al. 2017), we have a long way to go if we want to call our collective knowledge of sustainability “global”.

Systems as a foundation. One of the defining ideological battles of the last century was what role should governments play and what roles should markets play in society. We tend to simplify things and think of society as organized in three sectors: the State providing public goods, the market developing private goods, and civil society focusing on social goods. What the division of labor between these actors is becomes a political debate. While these types of visualizations are useful, the actual division of labor is far more nuanced and multifaceted. Colleagues and I have looked at these complex relationships as a set of interrelated roles. We as individuals play many roles as mothers, fathers, friends, colleagues, citizens, customers or for example eye witnesses. These roles provide constraints to how we are supposed to behave. Here we explore roles not at the individual level, but at the organizational level. For this, we need to map the network of interactions in a quantitative way as well as interview key actors in a qualitative way (Peterman et al. 2022). This picture is based on an analysis of a large energy network involving government, businesses, and civil society. It gives an example of the qualitative data being superimposed on the quantitative data. Thus we need to understand institutional structures as well as what roles organizations play (both the formal and the informal so to say) to really understand what each organization gets out of the

network. This level of complexity allows us to uncover hidden structures and the limits for any organization to go outside its role. This is interesting, as in sustainability, we see governments, businesses and civil society trying to adopt new roles. There is a lot of work to be done to understand these changes, meaning this dynamism.

Dynamism as a phenomenon. We have several policy approaches to achieve sustainable development which are depicted in this figure (Kourula et al. 2019). Each of these comes with its own drivers and problems. On the left we have legislation. We need minimum standards to make sure that for example our food and our buildings are safe. Nonetheless, regulation is a difficult game, as we can have problems related to for example unintended consequences, negative externalities, or enforcement. Second, to be able for companies or citizens to adopt more sustainable practices, governmental actors use a range of financial incentives to drive change. However, these incentives are not always easy to align and often we do not even know that they exist or how to use them. Third, when government regulation has not existed in different areas of sustainability, voluntary certificates or multi-stakeholder initiatives, often driven by non-governmental organizations, have emerged. Examples include your fair trade bananas, certified coffee or wood, and other such products. These in turn come with their own problems of comparability and competition between certifications, level of participation, and ambiguous outcomes of whether we are actually advancing sustainability. Fourth, we have a range of voluntary alliances across industries. Similarly, these alliances require a lot of resources to participate and can lead entire industries to agree on low sustainability standards. In the past decades we have often seen corporate sustainability as a voluntary activity of individual firms, but more and more we are seeing corporate sustainability becoming mandatory. This involves new national and European Union regulations. Our research has examined the contexts of climate change (Kourula et al. 2019) and human rights and environmental violations in multinational companies supply chains (Kourula & Delalieux 2016). We have examined the historical development of corporate sustainability regulation (Arora et al. 2019; Midttun et al. 2015), the role of unexpected events and political turns, and the activities that companies have towards regulators. The main idea has not been to evaluate single programs, but to look at the whole governance system in a particular context over time.

Finally, the fourth insight is about the dark side of corporate sustainability as an impact. We should not be naive in assuming that corporate sustainability will “save the world” or that there are no important tensions and contestations related to the theme. Measuring sustainability impact also comes with its own challenges. We have completed reviews about which United Nations Sustainable Development Goals and specific themes are given a spotlight, while others remain as blind spots for business and management scholars (Kolk et al. 2017; Kolk et al. 2019). Progress in and attention to specific Sustainable Development Goals is uneven. Furthermore, my colleagues and my prior research has critically examined how companies accused of using child labor in their supply chains whitewash their activities with easy to reach and lax self-regulatory schemes. We have analyzed how more stigmatized companies may actually benefit from their bad reputation as their scandals receive initially less media coverage (Barkemeyer et al. 2022). We have theorized about why and how firms do not lose their license even after very serious scandals. Thus, the dark side of business sustainability merits a lot more attention.

We have now reviewed four central themes in my research: 1) Context as key in sustainability, 2) Systems as a foundation, 3) Dynamism as a phenomenon, and 4) the dark side as an impact. All things considered, this has been a call for contextualized, systemic, and critical research in business roles and responsibilities in sustainability. How we look at measurement of outcomes depends on how we view the topic.

Today is a hopeful day. And one thing is very clear today: I have a lot of people to thank. Science involves building teams and being embedded in a broader community. Let me start by thanking my academic mentors.

- Thank you to Professors Minna Halme and Asta Salmi for supervising my doctoral thesis and acting as mentors throughout my career. From you, I have learned how to thrive for positive impact through scientific rigor.
- Thank you to Professor Jukka Mäkinen for teaching me about teaching and what it means to a scholar and a critical mind.
- Thank you to Professors Ray Levitt and Jeremy Moon for your kindness, guidance and for showing me how to build things together.
- Thank you to Professors Ans Kolk, Jan-Willem Stoelhorst and Mark van der Veen for guiding our Strategy and International Business section from its emergence to growth and through difficulties such as Covid-19. You have each played an important mentorship role in your own ways and I thank you for that.

A great big thanks goes also to the Strategy and International Business section. One could not wish for a more supportive and enjoyable academic home. You are all brilliant scholars and educators and I learn from you every day. I have been with you for over a decade and I look forward to see what we will build in the next one.

I am extremely grateful to our university's leadership. As our current and past deans and leaders, Professors Roel Beetsma, Marc Salomon and Han van Dissel you have provided excellent guidance for today and an exciting vision for tomorrow. Today is indeed a hopeful day as we see our University of Amsterdam leadership, our current and former Rector Magnificus who have led with ambition, commitment, and passion. I am very grateful to the University of Amsterdam Executive Board for appointing me in as Professor of Business and Sustainability.

Thank you students! I have had the great privilege to take part in education at all levels: bachelor, master, MBA, executive, executive MBA, and doctoral. It has been a real joy to explore and learn together. Collectively, thousands of you have listened to thousands of hours of me. You certainly deserve a prize for that.

Thank you to all co-authors, doctoral students, respondents, participants, and interviewees in my research projects. I have been extremely privileged to build and be part of teams of stellar scientists exploring exciting topics and pushing the frontiers of knowledge. Research is a team effort and I look forward to our next project. A special thanks goes to our doctoral students who courageously explore those new frontiers in new ways.

As one of my core research areas has been partnerships, it is natural that partnerships are part of who I am. These partnerships involve collaborators both within and outside academia. Over the years, I have learned a lot in various editorial roles at the Journal of Business Ethics, Business & Society, Journal of World Business and the Annual Review of Social Partnerships. These editorial teams have become part of my academic family. Thank you also to professional associations such as the Academy of Management, EGOS and GRONEN. Your conferences bring us together to do what we enjoy the most as academics: fight about our research findings and enjoy each other's company afterwards. University of Amsterdam as a world leading interdisciplinary university is the ideal place to research sustainability. Thank you Michelle Westermann-Behaylo for all our common sustainability endeavors. Thank you for our friends across the faculties of science, medicine and social and behavioral sciences for insightful conversations and promising projects. In addition, I would like to say thank you to the several public sector organizations, the large companies, the

startups, the professional service firms, and civil society organizations that have engaged in our research and teaching.

The greatest thanks goes to my family and friends. Thank you to my mother, my father, my brother and his family. My brother and I grew up in a world of no boundaries, ready for exploration. And when those explorations took a wrong turn, we could always come home for a warm embrace. Great value was placed on not only what you know, but how you will use it to help others. Thank you for not only telling me what's important in life, but for showing it to me every single day. It's hard to express how proud I have always been of you.

Thank you to my German family: my parents-in-law and my sister-in-law and her family. Your support throughout the past decade have been invaluable. Thank you for the countless moments of joy, laughter and general craziness. Danke für alles.

Most importantly, thank you to my wife and our boys. It feels like just yesterday we were doing our postdocs and surfing in California and now we are the four of us. You are my foundation, my home, my love. As the kids would say: "beste mama der welt". You make the every day full of meaning and you, patiently and endlessly, tolerate me. Thank you for that. I love you.

As we come to the end of our story, I want to show you another picture. This picture is taken approximately half a century after the first Earthrise picture I showed. We have explored different perspectives, underlying assumptions, and the broader picture of business roles and responsibilities in sustainability. We see a rapidly transforming world and the story of sustainability is all about change. We tend to overestimate change in the short term and underestimate change in the long term. Countless times we hear that change is impossible, impossible, impossible. Until it becomes inevitable.

Today is a hopeful day. It is really easy to be hopeful as you get to work with the most brilliant scientists and learn together with extremely competent students. The ideas, drive and passion are infectious. To paraphrase a famous saying, our role as academics is not to fill a bucket with knowledge, but to light a fire. And as academics, we will rage against the dying of the light of scientific knowledge in public discourse. I look forward to seeing how we at the University of Amsterdam take part in building a more sustainable tomorrow together.

Ik heb gezegd.

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