

THE FUTURE OF THE UNIVERSITY IN THE AGE OF SUSTAINABILITY: BALANCING TRANSFORMATION AND PERSISTENCE

Erkki KARO

Wolfgang DRECHSLER

Erkki KARO

Professor of Science and Technology Policy
Head of Department, TalTech's Ragnar Nurkse Department,
Tallin University of Technology, Tallin, Estonia
E-mail: erkki.karo@taltech.ee

Wolfgang DRECHSLER

Professor of Governance, TalTech's Ragnar Nurkse Department,
Tallin University of Technology, Tallin, Estonia
Honorary Professor of University College London in the Institute
of Innovation and Public Purpose, London, United Kingdom
Adjunct Professor of Universitas Indonesia
at the Faculty of Administrative Sciences, Indonesia
E-mail: wolfgang.drechsler@taltech.ee

Abstract

This essay explores the future of universities amid sustainability imperatives, addressing the balance between transformation and institutional persistence. Universities are under pressure to integrate sustainability into their missions while maintaining academic independence. The discussion highlights paradoxes such as societal relevance versus intellectual autonomy and the need for co-creation without compromising academic freedom. The paper advocates for embedding sustainability within university operations and fostering truly dynamic and mission-oriented governance. The role of leadership in bridging tradition and innovation is emphasized, underlining the need for universities to act as transformative institutions that align academic goals with global priorities.

Keywords: sustainability, university governance, institutional transformation, academic autonomy, Hans-Georg Gadamer.

1. Introduction

As we grapple with rapidly evolving socio-economic and technological landscapes, the role of the university as a pivotal institution for knowledge generation, economic growth, and societal change has never been more critical. The contemporary university faces increasing demands to engage with the most pressing global issues—climate change, digital ‘transformation’, social justice, and economic inequality—while balancing its traditional roles in education, research, young scholars’ generation, and community service.

These co-evolving mandates present both opportunities and challenges, requiring those in charge of universities to rethink the institutions’ strategies, governance models, and core missions to remain impactful and relevant in an unpredictable future while preserving values of stability and theoretical inquiry.

2. Navigating revolutionary change and institutional continuity

There is a growing sense, both in academia and among policy-makers, that we are living in an era of profound revolutionary change. Whether driven by the digital revolution, pushed by, and even superseded already by the AI label, by sustainability imperatives, or by new economic and security models, the pressures on institutions to innovate and adapt towards those driving forces have rarely been greater. Universities, as the generators and disseminators of knowledge, are expected to play a proactive role for these trajectories.

Universities are being called upon to not only generate new knowledge but also to actively participate in the redesign of socio-technical systems—energy, mobility, governance, and the economy—which requires a level of flexibility and innovation that traditional governance models struggle to accommodate. These expectations create a paradox: universities are typically conservative institutions, known for their stability and slow pace of change, which is an asset inasmuch as it allows them to maintain a long-term perspective on progress, to remain relatively immune, at least theoretically, to fads and fashions, and to focus on long-term societal development issues.

Universities have historically embodied continuity and stability, often described as ‘professional bureaucracies’ in Mintzberg’s terms, prioritizing stability, and depth over rapid adaptation (Mintzberg, 1979; Mintzberg and Rose, 2003). This also means that the social contracts between academia and society have evolved rather slowly and gradually (Martin, 2012). Today, however, popular, and political expectations are very different (see Karo *et al.*, 2016). Balancing these revolutionary expectations with the need for institutional persistence thus presents a unique challenge. And as Rudolf Otto observed in his reflections on academic institutions, moments of profound transition demand a pause for reflection, an examination of purpose and values, so as to ask, ‘What are we, what should we be?’ (Otto, 1927).

3. The paradox of relevance and non-relevance

A fundamental tension in the university's mission is the balance between societal relevance and the freedom to pursue knowledge unburdened by immediate applicability. Hans-Georg Gadamer underscores this through his concept of academia's 'freedom from ends', where inquiry must exist 'free of purpose' to allow knowledge to unfold independently of external pressures (Gadamer, 1991b, 1998). This balance is essential, for universities serve society not only by providing answers but by cultivating a space for deep, independent inquiry whose value may only reveal itself over time. As Gadamer asserts, genuine scholarship is characterized by its 'passion for theory', a freedom from utilitarian constraints that permits questions that enrich society in both tangible and intangible ways.

This freedom to pursue seemingly non-relevant knowledge is critical to innovation, as transformative discoveries often emerge from basic research unconstrained by practical concerns. In this light, the university's role includes preserving this freedom to contribute knowledge that may not provide immediate utility yet fosters a broader understanding of the world.

As a side note, especially universities of technology, from which we write, may face here the largest challenge in resolving the paradox that they have originally been designed to provide socially and economically useful and immediately applicable knowledge, skills and solutions, but paradigmatic changes in our socio-technical trajectories and views of the future would require them to partially let go of this core purpose and mission, at least for a while, to make sense of the future and the best pathways to get there—which however is in line with their historic move towards 'full' universities (see Karo *et al.*, 2024).

4. Ignoring fads, engaging with existential transformations

The most significant challenge universities face today is probably their role in addressing global sustainability issues. With climate change at the forefront of global policy agendas, universities are increasingly seen as key players in the global effort to create sustainable societies. The UN Intergovernmental Panel on Climate Change (IPCC; <https://www.ipcc.ch/>) has issued dire warnings about the narrowing window to mitigate the worst impacts of climate change, and universities are expected to not only educate the next generation of leaders but also to drive innovation in sustainable technologies and social practices (Stein, 2024).

One of the most common criticisms of how universities approach sustainability is the so-called 'add-on' approach, where sustainability goals are tacked onto existing strategic frameworks without a comprehensive redesign of core activities. This approach is evident in many universities that have created sustainability offices, research centers, or policies, but have not integrated these efforts into their broader institutional mission (Karo *et al.*, 2024; George *et al.*, 2024).

This approach risks reducing sustainability to a tokenistic endeavor rather than a foundational commitment. From a broader perspective, this would be an adequate strategic

approach in case sustainability was just another fad passing through our societies and institutions, as it would allow universities to maintain traditional roles and structures next to engaging with fads and fashions. But to engage effectively with sustainability as a real-existential challenge, universities must actively consider re-imagining their governance structures and values, positioning sustainability as an institutional priority that permeates research, teaching, and all other operations as well (see e.g., Loorbach and Wittmayer, 2024). It means inoculating sustainability into the DNA of universities, next to excellence and taking a long-term, curiosity-driven approach to the challenges (while also offering more immediate and dynamic solutions to the short-term issues of the broader sustainability drive).

Such an embedded approach arguably aligns with Gadamer's notion that genuine knowledge need not seek direct utility but contributes to society through depth and theoretical insight. Only by fully integrating sustainability as a guiding principle can universities respond to the long-term needs of society and the environment, indeed of human existence and the planet as a whole, while remaining true to their intellectual mission.

5. Political and societal demands

The problem is that, as we see more clearly in 2024 than for decades before, political demands and societal expectations towards the university are not always helpful for society itself and certainly not always in the interests of those whose demands are represented here. The entire idea of academic autonomy is the recognition that sometimes, going against what formatted society wants or demands is beneficial already in the mid-run, but that is not only hard in a democracy, but especially so in the polarized atmosphere of a social media world (van den Berg, forthcoming 2025). But this is a structural issue, as Gadamer makes clear:

The conflict between free research and state power is entirely irresolvable by political means. Political power is obliged to apply the criterion of purpose in all its decisions. By contrast, the postulate of the basic sciences is that they are 'free of purpose'. It is in a certain sense a necessary pretense when someone explains to the public, with its expectation of purpose, that science sometimes involves asking basic questions from whose answers no results can be expected that would directly fulfill any purpose. I call this a lame pretense because, in truth, all research is basic research, and only through a secondary transformation can it address the problem of applying its findings (Gadamer 1991b, pp. 78–79, 1998, p. 63).

And in his famous essay, 'The Limits of the Expert' (1989), he lines out that our ever-increasingly complex world has the tendency to 'outsource' decision-making precisely to experts, who thus are supposed to give final answers to the questions at hand, because in our culture we tend to equate scientific findings with truth. This, however, is impossible, because a genuine scholar can almost be defined by their insight that such clear answers precisely do not exist, nor is there a science-truth connex without context—anyway

not, but *a fortiori* not in all matters where human persons are concerned. Yet the demand placed on the university by state and society today is exactly that she be a center of experts, of expertise, a production-place of valuable and immediately applicable knowledge, and this inevitably leads to fundamental problems, because this is an impossible task.

But there is no planet B, and we live in the world we live in, to combine two truisms: the challenge of the university of the future is to gain support from the structures that exist, with the majorities or at least significant minorities that exist, while pursuing solutions for the future, not least for sustainability, well beyond ‘drill, baby, drill’.

6. Co-creation and collaborative engagement

As universities strive to address complex sustainability issues characterized by complexity, uncertainty and conflictual societal expectations, some fields of scholarship argue that universities should engage in co-creation with industry, government, and civil society (see Trencher *et al.*, 2014; Loorbach and Wittmayer, 2024). It is expected that this collaborative model would allow universities to address societal transformation, fostering a culture of relevance and inclusivity.

However, this implies that the fundamental dilemmas of change and continuity we addressed on the level of university missions reveal themselves also on the operational level: freedom of inquiry has traditionally been embedded in the visions and freedoms of scholars and academics (‘science is what recognized scientists recognize as science’; Marquard, 1985, p. 199), but any forms of co-creation, without engaged partners accepting the unique role and perspective of academia, would lead to constraints on this particular role.

In other words, these co-creative partnerships must preserve the university’s independence. Gadamer rightly emphasizes that academia’s mission is not merely to ‘deliver answers’ but to ‘ask fundamental questions’ in ways that foster long-term societal value (Gadamer, 1991b). Collaborative research should therefore enhance, not limit, scholarly freedom, as universities act as ‘niche-level’ experimenters, exploring new ideas with intellectual autonomy (see Stephens and Graham, 2010). Co-creation should not be based on the idea that academia helps society to fix real-world problems (as defined by policy and industry), but first of all help policy and industry to co-define the real real-world problems (along the long transformative pathway towards just and sustainable societies) and only then dig deeper into co-creating real solutions.

7. Balancing national and international demands

Sustainability is a global challenge and accordingly requires an adequate level of responses. Since their inception, universities have straddled both national and international roles. Historically, but *a fortiori* since the Reformation, European universities served national interests, preparing professionals while engaging in intellectual traditions. This dual role remains essential, for while state funding often supports university research, universities must preserve their commitment to open-ended inquiry (Drechsler, 1998). The first

‘national’ universities, such as Marburg in 1527, were founded without external privileges, aligning their missions with the needs of their respective states while fostering a broader ethos of *Wissenschaft*, or scholarship (see Kaehler, 1927).

Today, state funding often aligns research with specific societal needs, yet Gadamer rightly warns us that end-goal-oriented pressures risk compromising the values of open-ended inquiry, and ironically, this prevents reaching or helping those very end goals (Gadamer, 1991a). When one of the most famous academics of the 19th century, Matthew Arnold, called Oxford, explicitly in opposition to the German research university, ‘the home of lost causes’ (1865, preface), this is what he actually meant: if there is such a home, the causes are in fact not lost.

To balance these demands, universities must continue to act as both national and international institutions, pursuing knowledge that serves societal interests without sacrificing scholarly autonomy. By maintaining this commitment, universities uphold their essential role in fostering intellectual diversity and critical inquiry, without purpose and for the greater purpose.

8. The University as a learning organization and university leadership

To balance these competing demands, universities must evolve into ‘learning organizations’, which may be a particular challenge in the context of modern managerialism (see Stephens and Graham, 2010), which continuously adapt while remaining true to theoretical pursuits. This sounds oxymoronic, but such balances are often necessary, just as agile stability is for organizations supporting innovation generally (Kattel, Drechsler and Karo, 2022). Unlike traditional hierarchies, a learning organization emphasizes decentralized governance, empowering departments to innovate independently. Such governance structures create an environment where faculty and students can pursue intellectual agendas that align with both the university’s mission and societal needs.

Leadership is essential for fostering this adaptability, bridging continuity with change. Effective leaders understand the university’s role as both a stable institution and a dynamic center for progress (see Leigh and Teece, 2016). By embracing an inclusive, mission-oriented culture, leaders support the university’s resilience and its capacity to respond to external demands while preserving its academic principles.

The future of the university in the age of the sustainability imperative therefore depends on visionary leadership capable of aligning traditional academic goals with emerging global, and thus national, priorities. Effective leaders must integrate sustainability, inclusivity, and adaptability, preparing the university to address pressing challenges. Gadamer’s and Otto’s calls for introspection emphasize that university leaders must balance relevance and non-relevance, enabling universities to remain committed to their intellectual purpose while adapting to new societal expectations, because there is none without the other.

9. Conclusion

As universities move forward, it is clear that they must honor both historical roots and contemporary responsibilities. This means that the universities of the future must integrate sustainability, embrace decentralized governance, and foster a culture of learning and collaboration, while maintaining a commitment to theoretical inquiry. In this way, universities can fulfill their potential as transformative institutions themselves that benefit both their academic communities and society at large, but more importantly, once again, humankind and planet.

Acknowledgments. This essay draws on Karo (2024), Karo *et al.* (2024), and Drechsler (2005). Research underpinning the first of these was funded by the European Union's Horizon 2020 research and innovation programme under grant agreement no. 101035802. The use of ScholarGPT to fuse the three texts and produce a basic one, and to create the abstract, is acknowledged.

References:

1. Drechsler, W., 'Praise of Theory' – Idea and Task of the European University between National and International Demands', in Drechsler, W. and Mägi, R. (eds.), *Kaiserliche Universität Dorpat 200 – Academia Gustaviana 370 – The Jubilee of the University of Tartu*, Tartu: Tartu University Press, 2005, pp. 132–142.
2. Drechsler, W., *On the Eminence of the Social Sciences at the University of Dorpat*, Aula Lectures, Tartu: Tartu University Press, 1998.
3. Gadamer, H.G., 'Lob der Theorie' in *Lob der Theorie. Reden und Aufsätze*, 3rd edition, Frankfurt/Main: Suhrkamp, 1991a, pp. 26-51, English translation as 'Praise of Theory', 1998, pp. 16–36.
4. Gadamer, H.G., 'Wissenschaft und Öffentlichkeit', in *Lob der Theorie*, 1991b, pp. 77–87, English translation as 'Science and the Public Sphere', 1998, pp. 62–70.
5. Gadamer, H.G., *Praise of Theory. Speeches and Essays* (Chris Dawson, tr. New Haven), London: Yale University Press, 1998.
6. George, B., Worth, M.J., Pandey, S. and Pandey, S.K., 'Strategic Management of Social Responsibilities: A Mixed Method Study of US Universities', 2024, *Public Money and Management*, vol. 44, no. 1, pp. 15–25.
7. Hermelink, H., 'Der protestantische und landesherrliche Charakter der Universität Marburg' [The Protestant and Sovereign Character of the University of Marburg], in *Die Philipps-Universität zu Marburg, 1527-1927*, Marburg: Elwert, 1927, pp. 1–22.
8. Karo, E., 'Kuidas juhtida tulevikku?' [How to Lead the Future?], *TalTech Mente et manu*, September 17, 2024, [Online] available at <https://taltech.ee/uudised/erkki-karo-kuidas-juhtida-tulevikku>, accessed on November 12, 2024.
9. Karo, E., Kattel, R. and Raudla, R., 'The Contradictions of Academic Capitalism: The Case of the Estonian R&D System', in Samier, E. (ed.), *Ideologies in Educational Administration and Leadership*, London: Routledge, 2016, pp. 79–92.
10. Karo, E., Shakya, S., Voll, C.N., Fuchs, L., Cuevas, C. and Lember, V., 'Can Universities Become Transformative? Managing Sustainability Transitions in European Technological Universities, 2024, *SSRN Papers*, DOI:10.2139/ssrn.4993288.

11. Kattel, R., Drechsler, W. and Karo, E., *How to Make an Entrepreneurial State: Why Innovation Needs Bureaucracy*, London – New Haven: Yale University Press, 2022.
12. Leih, S. and Teece, D., ‘Campus Leadership and the Entrepreneurial University: A Dynamic Capabilities Perspective’, 2016, *Academy of Management Perspectives*, vol. 30, no. 2, pp. 182–210.
13. Loorbach, D. and Wittmayer, J., ‘Transforming Universities: Mobilizing Research and Education for Sustainability Transitions at Erasmus University Rotterdam, The Netherlands’, 2024, *Sustainability Science*, vol. 19, pp. 19–33.
14. Marquard, O., ‘Über die Unvermeidlichkeit der Geisteswissenschaften’ [On the Inevitability of the Humanities], in Westdeutsche Rektorenkonferenz, *Hochschulautonomie, Privileg und Verpflichtung*, Hildesheim: Lax, 1985, pp. 193–203.
15. Martin, B.R., ‘Are Universities and University Research under Threat? Towards an Evolutionary Model of University Speciation’, 2012, *Cambridge Journal of Economics*, vol. 36, no. 3, pp. 543–565.
16. Mintzberg, H. and Rose, J., ‘Strategic Management Upside Down: Tracking Strategies at McGill University from 1829 to 1980’, 2003, *Canadian Journal of Administrative Sciences/ Revue Canadienne des Sciences de l’Administration*, vol. 20, no. 4, pp. 270–290.
17. Mintzberg, H., *The Structuring of Organizations*, Scarborough, CA: Pearson Education, 1979.
18. Otto, R., *Sinn und Aufgabe moderner Universität. Rede zur vierhundertjährigen Jubelfeier der Philippina zu Marburg* [Meaning and Task of Modern University. Speech on the Four Centenary Celebration of the Philippina in Marburg], Marburg: Elwert, 1927
19. Stein, S., ‘Universities Confronting Climate Change: Beyond Sustainable Development and Solutionism’, 2024, *Higher Education*, vol. 87, pp. 165–183.
20. Stephens, J.C. and Graham, A.C., ‘Toward an Empirical Research Agenda for Sustainability in Higher Education: Exploring the Transition Management Framework’, 2010, *Journal of Cleaner Production*, vol. 18, no. 7, pp. 611–618.
21. Trencher, G., Yarime, M., McCormick, K.B., Doll, C.N.H. and Kraines, S.B., ‘Beyond the Third Mission: Exploring the Emerging University Function of Co-creation for Sustainability’, 2014, *Science and Public Policy*, vol. 41, no. 2, pp. 151–179.
22. van den Berg, C., ‘On Universities and Society: Renewing the Strained Contract in Times of Societal Polarization’, *Halduskultuur*, forthcoming (2025).