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The Planetary Wellbeing Initiative: Pursuing the Sustainable Development Goals in Higher Education

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Abstract: We live in a time of pressing planetary challenges, many of which threaten catastrophic change to the natural environment and require massive and novel coordinated scientific and societal efforts on an unprecedented scale. Universities and other academic institutions have the opportunity and responsibility to assume a leading role in an era when the destiny of the planet is precisely in the hands of human beings. Drawing on the Planetary Health project promoted by the Rockefeller Foundation and *The Lancet*, Pompeu Fabra University launched in 2018 the Planetary Wellbeing Initiative, a long-term institutional strategy also animated by the United Nations Sustainable Development Goals (SDGs). Planetary Wellbeing might be defined as the highest attainable standard of wellbeing for human and non-human beings and their social and natural systems. Developing the potential of these new concepts involves a substantial theoretical and empirical effort in many different fields, all of them interrelated by the crosscutting challenges of global complexity, interdisciplinarity, and urgency. Close collaboration of science, humanities, and culture is more desperately needed now than ever before in the history of humankind.

Keywords: planetary wellbeing; Sustainable Development Goals (SDGs); planetary challenges; climate change; global health; complexity; interdisciplinarity; urgency; higher education; university transformation

1. The Planetary Wellbeing Initiative

We live in a time of pressing planetary challenges, many of which threaten catastrophic change to the natural environment and require massive and novel coordinated scientific

and societal efforts on an unprecedented scale. These times are reflected also in the field of higher education, where globally and on an increasing scale, higher education institutions are transforming to contribute to the resolution of these challenges [1]. While the scholarship attests to the conceptualization and actions undertaken for sustainable transformation of higher education institutions [2–5], the present short paper outlines one way in which Barcelona’s Pompeu Fabra University (UPF) is responding to these challenges, and thus it provides an example of how higher education institutions might meet their responsibility in confronting those challenges through conceptualization of the underlying sustainable aim of the transformation required in the existing institution.

In 2015, the Rockefeller Foundation and *The Lancet* proposed adopting the concept of “Planetary Health” to refer to the highest standard of human health attainable without jeopardizing the Earth’s natural systems [6]. Clearly, the pursuit of planetary health has been one of the main constituents of human progress over recent centuries, and is central to the wellbeing of future generations. Over the last five years, planetary health has been an active interest for various researchers at UPF. Building on this interest, in 2018, the University President, Professor Jaume Casals, launched the Planetary Wellbeing Initiative (PWI) [7]. The PWI is a long-term institutional strategy, animated by the United Nations Sustainable Development Goals (SDGs) [8]. It acknowledges the severity of the current global emergencies and displays a determination to transform the university internally to meet the new challenges those emergencies pose.

As we elaborate below, the PWI understands the concept of “planetary wellbeing” as *the highest attainable standard of wellbeing for human and non-human beings and their social and natural systems*. This definition assumes that we can hope to flourish in harmony with other human and non-human beings, only through judicious attention to the political, legal, economic, cultural, and social institutions that shape the Earth’s natural systems. Integral to the initiative is the idea that identifying strategies that promote planetary wellbeing requires a combination of impact-oriented research with multidisciplinary and interdisciplinary activity [9].

The PWI currently includes several lines of action in our three main areas of activity: research, education, and dissemination. These lines include an annual multidisciplinary university meeting, an annual call for internal research seed funding, the organization of several annual conferences and international research meetings, the design of a MOOC (Massive Open Online Course) on planetary wellbeing, the creation of an undergraduate minor on planetary wellbeing as well as a master’s program on planetary health organized jointly with the Open University of Catalonia (UOC), the awarding of a prize for the best master’s thesis and for the best doctoral thesis on planetary wellbeing, and the organization of periodic public talks and dialogues. Each of these activities is informed by and advances the study of planetary wellbeing, understood as a holistic approach to higher education that involves both top-down and bottom-up transformations that enable the university to become an important agent for change in the quest for sustainability [10].

The present outline begins with the reasons supporting the formulation of the PWI, a succinct statement of which may be useful for other higher education institutions, and the conceptual innovations underpinning it [11]. It then attempts to define planetary wellbeing while considering different types of task involved in developing and implementing a planetary wellbeing approach to higher education. The unprecedented and urgent challenges posed by the current environmental crisis as well as the current pandemic and global health emergency represent an unprecedented opportunity for universities to pursue these tasks and contribute towards leading the transformation social institutions must undertake.

2. The Background of the Planetary Health Approach

The SDGs are the 2015 successors of the Millennium Development Goals (MDGs), which were conceived to promote cooperation between all states rather than a “donor–recipient” relationship. The sustainability dimension of the SDGs emerged from the 2012 Rio + 20 United Nations Conference on Sustainable Development (UNCSD). At Rio,

states agreed to a resolution known as “The Future We Want”, which focused on poverty eradication, energy, water and sanitation, and health. Although increasingly prominent in this century, interest in the idea of sustainability is longstanding: it was already discussed (albeit in a more sectorial manner) in the 1960s [12] and was of considerable scientific interest in the 1970s [13], culminating in the most widely used definition of the term in the 1980s [14]. The idea has been developed further by the UN 2030 Agenda, the most recent global agreement on the challenges now facing humanity, which serves as the basis of the planetary wellbeing approach.

In 2013, Dave Griggs, Norichika Kanie, and nine co-authors defined “sustainable development” as “development that meets the needs of the present whilst safeguarding Earth’s life-support system upon which the welfare of current and future generations depends” [15]. They identified various ‘must haves’ as pre-conditions for human prosperity that arise from nine planetary boundaries on safe human conduct, identified by Rockström et al. in 2009 [16]. The authors combined these boundaries with the MDG goals, which were later updated and extended to the year 2030 or beyond to produce six SDGs: (1) thriving lives and livelihoods; (2) sustainable food security; (3) sustainable water security; (4) universal clean energy; (5) healthy and productive ecosystems; and (6) governance for sustainable societies. In the year 2015, the UN General Assembly adopted the 2030 Development Agenda, which was entitled “Transforming our World: the 2030 Agenda for Sustainable Development” and declared seventeen Sustainable Development Goals [8].

One important scientific development in formulating the SDGs has been the recognition that in the Anthropocene [17], human development and wellbeing cannot be promoted in the long term unless the Earth’s natural systems are preserved, and their role explicitly acknowledged by any new development agenda [18–23]. Though not yet officially adopted, and currently still representing an emerging idea, “Anthropocene” is the term used to refer to the geological epoch when human activities became the main drivers of changes in the Earth’s systems [21].

The launching of the SDGs in 2015 coincided with the 21st Conference of Parties (COP21) of the United Nations Framework Convention on Climate Change (UNFCCC) where the Paris Agreement was adopted. The Paris Agreement’s long-term goal is to keep global average temperature well below 2 °C above pre-industrial levels and to attempt to limit the increase to 1.5 °C, thereby substantially reducing the risks and impacts of climate change. The importance of the 1.5 °C threshold was further emphasized by an IPCC Special Report in 2018, which stressed the importance of achieving global carbon neutrality no later than 2050 [22]. This is the background against which the Rockefeller Foundation and *The Lancet* proposed the idea of planetary health mentioned above.

3. From Planetary Health to Planetary Wellbeing

Moving from the relatively well-defined idea of planetary health, proposed by the Rockefeller-*Lancet* initiative, to the more expansive idea of planetary wellbeing, was deliberate. It was justified because a focus on human health is under-inclusive: goods other than health and, arguably, entities additional to human lives both matter when assessing institutional design. To accommodate this insight, we need a broader idea, and this triggered the PWI’s adoption of the term ‘planetary wellbeing’, despite its open-ended character.

Providing a commonly accepted conceptual framework for identifying wellbeing and its various dimensions is the first task an initiative like this must pursue [23]. Popular uses of the term ‘wellbeing’ usually relate to health or happiness [24]. Philosophical usage is broader, but related, and amounts to the notion of how well a person’s life is going for that person. A person’s wellbeing is what is ‘good for’ them [25], and a comprehensive account of personal wellbeing will cover all the positive aspects of an individual’s life. Amongst the various contending accounts, some focus on more subjective factors, such as the quality of a person’s experience or the extent to which their desires are satisfied, whilst others focus

on more objective factors, such as the extent to which they successfully pursue worthwhile goals or develop a set of basic capabilities that are objectively necessary for that pursuit.

The concept of planetary wellbeing, which includes that of planetary health, has an individual, a social, and a planetary dimension. At the individual dimension, it includes not only health but also education, economic capacity, appropriate housing, as well as any other element that is a prerequisite for a good life. The individual dimension applies to non-human animals too. At the social dimension, it includes a concern for human rights, democracy, justice, and the rule of law, as well as the grounds for a life of dignity and self-respect, free from domination and discrimination. Finally, its planetary dimension includes the wellbeing of all the Earth's natural systems. Of course, all these dimensions are interconnected. Thus, the planetary wellbeing concept adopts an integrated approach to the individual, social, and planetary dimensions, that is consistent with the plurality of concerns and values expressed through the seventeen SDGs. Planetary wellbeing therefore reaches far beyond the areas of health, biology, ecology, and climate science, allowing for the consideration of almost any other area of human knowledge and culture: it refers to the wellbeing *of, in, and for* the planet. It includes a concern for the sustainability of the planet itself and its ecosystems, of the beings living in it, and for the sake of the members of future as well as present generations.

The definition of planetary wellbeing employed by the UPF is an extension of the definition of planetary health provided by the Rockefeller-*Lancet* Commission [6] and broadens it in two respects. It multiplies the number of fundamentally important entities (not just humans, but also some non-human animals and nature) and multiplies the factors that contribute to the quality of human life, and so includes various capabilities and functions additional to health. Accordingly, we can offer the following working definition of Planetary Wellbeing: it is the highest attainable standard of wellbeing for human and non-human beings and their social and natural systems. This definition assumes that we can hope to flourish in harmony with other human and non-human beings but only through judicious attention to the political, legal, economic, cultural, and social institutions that shape the Earth's natural systems.

One might wonder whether such a broad concept of planetary wellbeing is sufficiently meaningful and not too vague. Costanza et al. suggested the need for the SDGs to converge on a higher goal that can set a metric of overall planetary progress, based on the overarching goal of a sufficiently high quality of life that is equitably shared and sustainable [26]. We believe that planetary wellbeing, as defined here, could designate this overarching goal. Our notion of planetary wellbeing is also consistent with the idea that human wellbeing represents an overarching goal of our society, and that it has a multi-dimensional nature, including wealth, equity, and education, as formulated in the International Panel on Social Progress Report (IPSP) [27] and by Dryzek and Pickering [20]. However, the concept of planetary wellbeing transcends these previous formulations by embracing the goal of reaching the maximum levels of wellbeing for living beings additional to humans and for the Earth's social and natural systems.

The concept of planetary wellbeing is ambitious but not ideological, political, or partisan. This is not to say that the concept has no direct link to political issues. On the contrary, equity, justice, and fairness are central aspects of planetary wellbeing, including especially timely issues such as poverty and minority segregation in wealthy countries, and the plight of the global South as a whole. When UPF states that universities should play a leading role transforming our social institutions, it is not aiming to make a political statement. It is simply orienting its scientific efforts—in research, teaching, and dissemination—to the understanding of the urgent planetary challenges that affect our wellbeing and to the search for workable solutions that seek to strike an optimal balance between all the aspects of planetary wellbeing, avoiding large tradeoffs that might jeopardize the attainment of such a high standard of wellbeing.

4. Understanding the Challenges of Planetary Wellbeing

The Rockefeller-*Lancet* Planetary Health report identified three types of challenges for the planetary health initiative to be fully developed: conceptual challenges, knowledge challenges, and implementation or governance challenges [6]. The present section briefly discusses how these different kinds of challenges also apply to the PWI.

4.1. Conceptual Challenges

“Planetary wellbeing” is a normative concept: it sets a regulative ideal for all of humanity as well as for the planet. Securing the complete wellbeing of every living being is unattainable but is a guiding aspiration. Additionally, much normative work still needs to be done to fully understand how the different elements that comprise this ideal must be integrated.

Philosophers, psychologists, and other scientists have understood “human wellbeing” differently [27]. We do not intend to take sides in these debates. Our use of the concept of wellbeing does not even involve a commitment to a welfarist approach to evaluating institutions to the exclusion of the capability-based or resourcist approaches defended by Amartya Sen, John Rawls, and Ronald Dworkin [28]. Yet, it needs to be noted that all notions of wellbeing share something in common: they all refer to a plurality of positive elements or factors that make for a good human life. Such factors are generally conceived as non-instrumental goods—that is, as ultimate or final ends for rational agents to pursue. One should, however, not get distracted by the distinction between instrumental and non-instrumental goods. The focus should be on identifying sources of human wellbeing, regardless of whether they are non-instrumental or are merely instrumental regarding our ultimate human ends.

One of the conceptual challenges to defining planetary wellbeing is that we lack a single, commonly agreed, and general theory of human wellbeing. The plurality of accounts and views provided by philosophers, psychologists, and other scientists, among others, has not generated a sufficiently detailed consensus [27]. There is a consensus that wellbeing is multi-dimensional and that it has both objective and subjective attributes. However, it is still unclear as to which dimensions matter and how they should be defined [29]. To illustrate this complexity, it is helpful to consider the OECD’s approach to wellbeing. On the one hand, the OECD Guidelines on Subjective Wellbeing [30] emphasize subjective wellbeing assessments that are ‘global’ in character, something that is equivalent to concepts such as life satisfaction as a whole, happiness, or eudaimonic wellbeing. On the other hand, the OECD’s ‘How’s Life?’ Framework [31] adopts a multidimensional view with eleven dimensions that are divided between two ‘pillars’, labeled ‘Quality of Life’ and ‘Material Conditions’. Particularly relevant to the concept of planetary wellbeing is a third element of the ‘How’s Life?’ Framework, which is labelled ‘sustainability’ and focuses on the natural, human, economic and social types of ‘capital’ that enable present wellbeing to be translated (or not) into future wellbeing outcomes. Some might suggest that the lack of an agreed general theory should be addressed through a contextualized approach in which wellbeing might mean different things to different people, in different circumstances and situations, and according to different theories that may be relevant in various contexts [32]. However, the contextualized approach does not resolve which theories may be needed, and how theories and contexts should be interlinked [33].

The conceptual difficulties in defining wellbeing are even greater when it comes to defining planetary wellbeing. The concept of planetary wellbeing requires considering the wellbeing of future generations, the wellbeing of non-human animals, the wellbeing of other living beings, and also the wellbeing of societies, ecosystems, and even the entire planet. Furthermore, in contrast to the OECD and other frameworks, other living beings, as well as the social and natural systems, are not seen by the PWI as merely key determinants for human wellbeing, but as subjects of wellbeing themselves [34].

A key issue related to the concept of planetary wellbeing is the nature-nurture dichotomy and how nature has been decoupled from culture in most industrial and post-

industrial societies [6]. Interconnecting research on wellbeing with research on sustainability has been suggested as an important area, potentially resulting in an all-inclusive increase in wellbeing [35]. In this context, compassion and empathy have emerged as relevant human attributes. Interestingly, even if the term “empathy” is generally used to denote the human capacity to place oneself in another’s position, there is growing evidence that empathy is not unique to humans, as it has a deep evolutionary origin [36]. In addressing the conceptual challenges of planetary wellbeing, the humanities and the arts have a key role in developing new ways of thinking to address the Anthropocene’s challenges [37]. In this regard, it is encouraging to see that the climate emergency is pushing a new generation of humanities scholars and artists to place the climate crisis at the center of their work.

4.2. Knowledge Challenges

In the previous section, we introduced planetary wellbeing as a normative concept. However, planetary wellbeing can also be considered as an opportunity for new research that stimulates connections between different scientific disciplines on issues relevant to the future of our planet.

Knowledge challenges in studying planetary wellbeing arise because of the abundance of scientific theories that disregard any social and environmental context [38], the historical scarcity of interdisciplinary research and funding [39], and the difficulties arising from the complexity and uncertainty inherent in many research topics [40]. The Rockefeller-Lancet report on planetary health inspiringly convened a large multidisciplinary group of scholars to elaborate a wide research agenda [6]. In the same way, the International Panel on Social Progress coordinated hundreds of the world’s leading researchers, sociologists, and economists to rethink society in the 21st century and developed various research-based, multi-disciplinary, non-partisan, action-driven solutions to the most pressing challenges of our time [27]. These pioneering initiatives can be extended to many other issues and fields to develop the new science base for planetary wellbeing.

The concept of planetary wellbeing also demands a crosscutting approach to scientific knowledge and research, one that allows us to address issues relevant for the concept of planetary wellbeing, which are at the same time common to many other knowledge areas and disciplines. We suggest five defining components of this new approach to planetary wellbeing: (i) a focus on planetary wellbeing, (ii) with a global scope, (iii) addressing complexity, (iv) through multidisciplinary and interdisciplinary work, and (v) with a sense of urgency that guides an impact-oriented approach.

Planetary wellbeing is a global concept concerned with the common good, the good of all present and future living beings on the planet. Therefore, achieving high levels of planetary wellbeing faces challenges on a planetary scale, many of which also carry a local dimension. Thus, adopting a planetary wellbeing approach in conducting scientific research means accounting for such planetary or global dimensions of many of the issues our societies face by considering the multiple layers, from the local to the global ones, they contain.

Understanding global issues, such as climate issues, ecosystems, pandemics, or migrations, involves the need to understand complex systems. Complex systems have distinct properties such as nonlinearity, emergence, spontaneous order, adaptation, and feedback loops, amongst others [41]. A key aspect of the challenges involved in developing knowledge about planetary wellbeing is what we need to promote the adoption of new scientific developments, such as network science [42], big data, or data science approaches. These new scientific developments are being adopted in almost all academic fields, from biology and medicine to economics and political science, making the possibility of collaboration between very disparate disciplines increasingly attractive.

Another important consequence of the global and complex nature of planetary wellbeing is the need for the different disciplines working to work together in modes that are multidisciplinary (drawing on knowledge from different disciplines but remaining within

the boundaries of those fields), interdisciplinary (analyzing, synthesizing, and harmonizing links between disciplines into a coordinated and coherent whole) and transdisciplinary (using a shared conceptual framework drawing together new disciplinary-specific theories, concepts, and approaches to address common problems) [41]. The assumption here is that the global challenges we face are so complex that their thorough examination and solution requires different scientific disciplines to work in alliance with each other [43–45]. An effective approach should facilitate such interconnectedness and require the combination of efforts and knowledge from different disciplines, from medicine to biology and climate science, from economics to political science and law, from the humanities and culture to technology [46]. In this deepest sense, all scientific and cultural disciplines and university departments should see themselves as involved in a general research initiative focused on planetary wellbeing and should develop their own ways to collaborate in contributing towards the promotion of the seventeen SDGs. The concept of “convergent science” has been proposed as a way of thinking about the process of research and the types of strategies that enable this, as emerging scientific and societal challenges cut across traditional disciplinary boundaries in these fields, representing a cultural shift for academic institutions traditionally organized around discipline-based departments [47].

The climate emergency and the pandemic crisis we are living through today constitute excellent illustrations of the need for this degree of scientific integration and interdisciplinary collaboration. Climatologists, biologists, and geologists need to work together to be able to understand how the climate works and to predict its immediate and long-term impact, but they also need to collaborate with doctors, economists, and sociologists in order to understand the consequences of this impact on our lives, and they must cooperate with political scientists and lawyers to understand and identify the most adequate ways to implement solutions that may prevent some of the adverse effects of those the consequences. As clear and self-evident the example of climate change is for everyone, the COVID-19 pandemic and its subsequent health, economic, social, and political crises provide an even more striking illustration of the complexity, the urgency, and the systemic dimensions posed by modern global challenges [48].

Finally, the knowledge challenges analyzed in this section come together with a sense of urgency that derives from the massive planetary challenges that trigger this initiative and pushes us towards a more mission-oriented and impact-oriented research.

4.3. Implementation Challenges

Implementation challenges require no less attention than the conceptual and knowledge challenges, since the actions undertaken today to address, for example, climate change will possibly be decisive for the future of humanity. There is wide agreement that various solutions for dealing with climate change are available and must urgently be implemented [14]. In the case of universities, these implementation challenges carry a double dimension: the first is related to the corporate strategies needed for transforming universities into sustainable institutions that play an exemplary role and thereby contribute towards societal transformation, and the other is related to the transformation of their research and education portfolios [49].

A report prepared by the Higher Education Climate Adaptation Committee, in support of the American College and University Presidents’ Climate Commitment (ACUPCC), suggested several strategies that higher education institutions should consider, including both corporate and educational aspects [9]. Among other corporate actions, the Committee recommended: i) facing up to direct risks to their operations and infrastructure from the impacts of climate disruption; ii) implementing role-model solutions in their own operations; and iii) working directly with their local communities to explain the science and implementing solutions for adaptation and mitigation. Universities are increasingly declaring a climate emergency and strengthening their commitments to contribute to the SDGs agenda and become sustainable institutions. These suggestions and recommendations have been confirmed by various best-case examples of sustainable transformation

in European higher education, where the most successful transitions involved a holistic and two-pronged approach, drawing on the university as an organization and a set of characteristic activities [50–52]. The PWI has reinforced the institutional strategy for sustainability, which has been a driver for the 2019 “UPF Declaration of Climate Emergency” and has contributed to the first assessment of its carbon footprint and the setting of various concrete and ambitious targets for footprint reduction.

Regarding the transformation of the educational role and curriculums of higher education institutions, implementation challenges are somewhat more complex. In a recent review of the core curriculum in the top one hundred U.S. universities and liberal-arts colleges, the probability that a student takes at least one climate change course via the core curriculum was estimated at 0.17% across all schools [53]. In the abovementioned ACUPCC’s report [9], the following actions were recommended: i) adopting a critical role to play in preparing society to adapt to the impacts of climate disruption by providing research and education around adaptation strategies and science; ii) increasing their curricular offerings on climate adaptation, both through mainstreaming the information in core courses and offering electives that specialize in the topic; and iii) updating the curricula across a diverse range of disciplines to address climate adaptation.

In this area, UPF is developing new, transformative educational initiatives. Some aim at changing existing programs, courses, and subjects from the eight departments at UPF so that they adopt a more global scope related to planetary wellbeing and a clear perspective on how they contribute to advancing the awareness, understanding, and motivation for action regarding the SDGs in general and the different elements of planetary wellbeing in particular (following the results of empirical studies on best practices as well as the EU recommendations [10,53,54]). They also include the creation of new specific and interdisciplinary programs, like a minor on planetary wellbeing that will be accessible within all undergraduate programs offered by UPF, and a master’s program on planetary health organized in collaboration with the Universitat Oberta de Catalunya (UOC) and ISGlobal. Finally, they include the creation of new specific courses, such as an MOOC on planetary wellbeing that will be compulsory for all university undergraduate students, and open to the global citizenry in general, and other courses on core areas of planetary wellbeing, such as sustainability, climate change, global health, loss of biodiversity, and global governance, among others. All these initiatives face obstacles in the form of regulations and constraints from central government [55], but also the reluctance of some colleagues [56]. As a result, promoting an ambitious initiative on planetary wellbeing requires not only the highest level of commitment and conviction on the part of the university leadership, but also steadfast pursuit by faculty and non-academic staff.

Finally, the idea that dissemination and outreach must necessarily be connected to research and education is essential to the Planetary Wellbeing Initiative. Universities have a central role not only in developing much needed research on the complex issues concerning planetary wellbeing but also in teaching and promoting the view that a new kind of science and approach to such issues is needed. In addition, universities enjoy a privileged position to disseminate research results to the wider public and to encourage the production of artistic and other cultural endeavors that have a direct impact on public opinion and conduct. From that perspective, the PWI has promoted the organization of events open to all citizens both inside and outside the university, collaborated with various external cultural and social organizations, the published and disseminated articles and reports, and supplied researchers working on planetary wellbeing issues to local, national, and global media.

However, all these efforts are insufficient. Planetary wellbeing has a global reach that concerns us all, and we should endeavor to define a conceptual educational framework that can be taught not only at universities but also at primary and secondary schools, as well as in life-long learning programs open to everyone, regardless of their educational background. Finding a pedagogical template that can be refined by teachers working at all educational levels should be one of the goals of a project such as this.

The issues involved in the idea of planetary wellbeing are not only global and complex, but also urgent and pressing. Although most of humanity's major challenges are long-term, many of them also have pressing implications that require immediate coordinated actions, forcing the planetary wellbeing approach to adopt an effective impact orientation. For that reason, it is crucial to learn more about the methods and research approaches that reliably generate timely real results, and the scientific community should become accustomed to being permanently evaluated on those grounds.

Directly related to the implementation challenges is the idea of urgency. In the previous sections, we emphasized the urgent need for large transformative changes if global warming is to remain below 1.5–2 °C and the SDGS 2030 agenda is to be successful. However, we are aware that global complex global problems demand more than short-term, simplistic, and myopic solutions. Furthermore, we are also aware that the actions causing a positive impact today might have undesirable consequences tomorrow. Finally, we are also aware that basic research, which is not applied or practically or impact-oriented, is also essential for providing new resources and avenues of creativity for tomorrow's impact-oriented research. It would be detrimental for the planetary wellbeing approach to exclude or sidetrack more general and basic forms of research. Thus, the planetary wellbeing approach requires both basic and applied impact-oriented research, while strengthening the emphasis on urgent and impact-oriented research, all with a long-term and interdisciplinary perspective.

5. Concluding Remarks

The previous sections have argued that planetary wellbeing is an overarching concept, providing institutional impetus and top-down support for an integrated understanding of the unprecedented challenges that our planet faces in relation to the Anthropocene and the climate crisis. Guided by the concept of planetary health and the recognition that humanity can aspire to flourish only alongside non-human beings and in ways attentive to environmental boundaries and the political, legal, economic, cultural, and social systems shaping Earth's natural systems, we have suggested that planetary wellbeing should be defined as the highest attainable standard of wellbeing for human and non-human beings and their social and natural systems. In short, planetary wellbeing must be understood as wellbeing in, of, and for the planet. Developing these new concepts will involve a substantial theoretical and empirical effort in many different fields, all of them interrelated by the crosscutting challenges of global complexity, interdisciplinarity, and urgency. Close collaboration between science, humanities, and culture is now more desperately needed than ever before in the history of humankind. We must push forward such collaboration with great ambition and passion, and universities and other academic institutions have the opportunity and responsibility to assume a leading role in an era when the destiny of the planet is precisely in the hands of human beings.

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