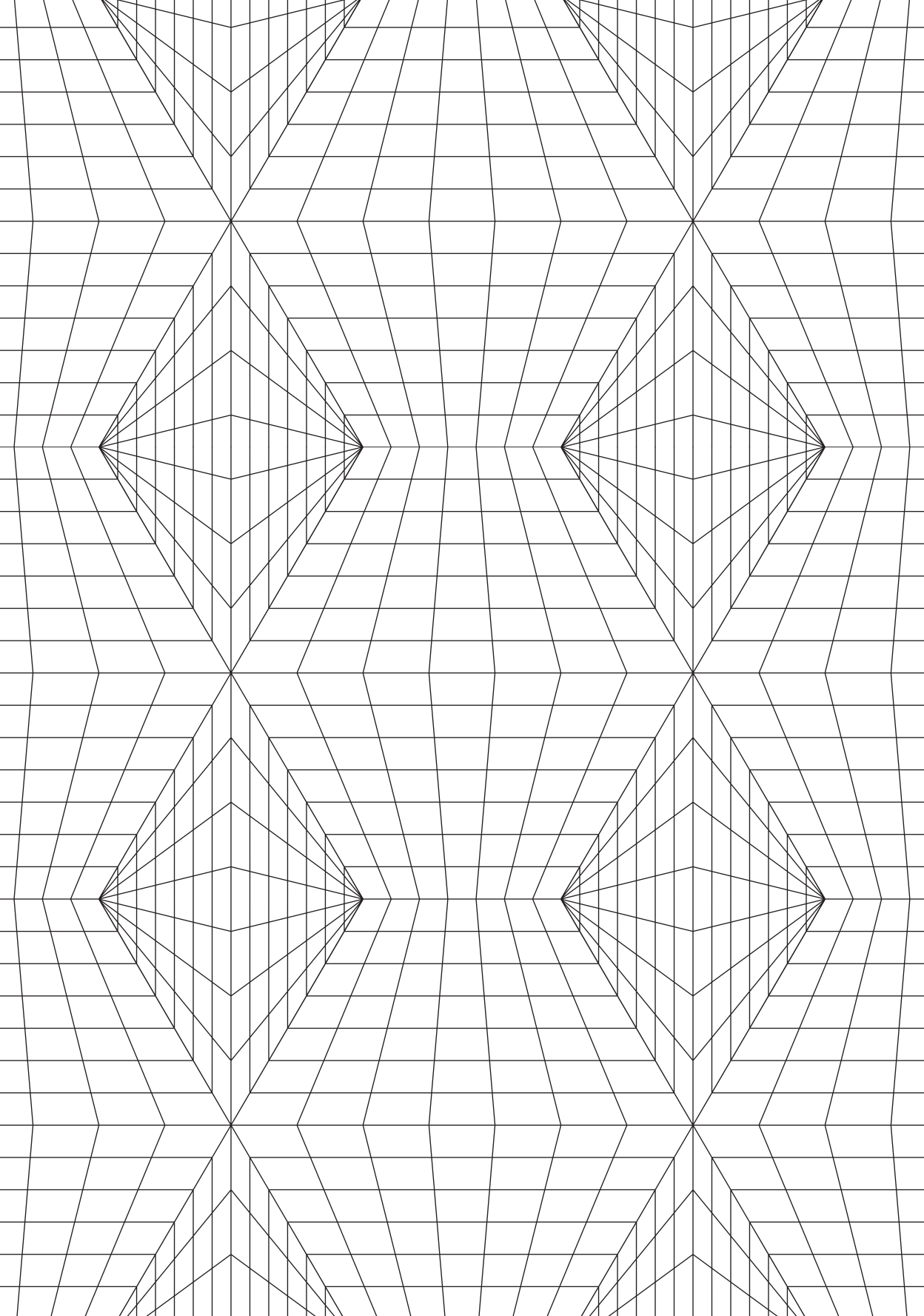
DISEGNO

VIII/02_*journal of design culture_Total(itarian) Design*



Disegno

Journal of Design Culture
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Disegno publishes original research papers, essays, and reviews on all aspects of design cultures. We understand the notion of design culture as resolutely broad: our aim is to freely discuss the designed environment as mutually intertwined strands of sociocultural products, practices, and discourses. This attitude traverses the disciplinary boundaries between art, design, and visual culture and is therefore open to all themes related to sociocultural creativity and innovation. Our post-disciplinary endeavour welcomes intellectual contributions from all members of different design cultures. Besides providing a lively platform for debating issues of design culture, our specific aim is to consolidate and enhance the emerging field of design culture studies in the Central European academia by providing criticism of fundamental biases and misleading cultural imprinting with respect to the field of design.

All research papers published in Disegno undergo a rigorous double-blind peer review process.
This journal does not charge APCs or submission charges.

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Contents

introduction

004 *Olivér Horváth. The Russian Dolls of Being, or What God's Eye Tells the Bot's Brain*

research papers

010 *Dávid Csűrös and Ákos Schneider. From Participation to Extraction: The Rise of Predictive Design*

036 *Sándor Őze. Cybernetic Modern Design in Emerging Post-Fordism: Systems Thinking, Industrial Transformation, and the Logic of Flexible Accumulation*

essay

058 *Márton Horn. The Shifting Institutional Logic of Museums: Economy, Audiences, and Architecture*

guest essay

070 *Dennis Meadows. Preface to the 50th Anniversary Special French Edition of* The Limits to Growth

review

078 *Ármin Tillmann. The Somaesthetic Impulse, or How Can Design Culture Shape Our Life Forms? Richard Shusterman and Bálint Veres, eds:* Somaesthetics and Design Culture

interviews

086 *Objects in Exile: An Interview with Robin Schuldenfrei by Ágnes Anna Sebestyén*

098 *The Capacious Umbrella of Design Culture: An Interview with Ben Highmore by Márton Szentpéteri*

110 *Calculating Empires, Fog of War, Zelda and Navigating in Post-Ideological Networks: An Interview with Vladan Joler by Ábris Gryllus*

120 ***about the authors***

DISEGNO_VIII/02_TOTAL(ITARIAN) DESIGN

Preface to the 50th Anniversary Special French Edition of The Limits to Growth

Dennis Meadows

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In an amusement park near Metz, France, is Anaconda, one of the tallest wooden roller coasters in Europe. It serves as a useful analogy for thinking about limits to growth fifty years after the publication of our original results.[1]

In 1972 humanity's situation was in one way similar to that of people who held tickets for a ride on Anaconda. They could have decided not to take the trip. Instead they remained on the train assuming the benefits of the ride would be greater than the costs. In 1972, despite the enormous public debate stimulated by our findings, people implicitly assumed that the benefits of riding the growth train further would be greater than the costs.

But, of course, a roller coaster can not carry people higher forever—not even if it has been designed by French engineers. Eventually the coaster car reaches its limit, slows down, and begins its decline. Now it is fifty years later, and humanity's situation is similar to that of the people in the coaster car at the top of the highest hill. Now they no longer have the option of deciding whether the benefits of the ride will exceed the costs; they are committed to the full trip. Everyone on the roller coaster has already given up their control over the speed of decline and the path of the train. As the car starts its drop their only option is to hold on as best they can and hope they will survive the ride.

This analogy has limitations. A roller coaster ride typically lasts a minute or two. For example, the Anaconda trip lasts only 130 seconds. The train always returns to its starting point without harming its riders. After it stops they can get off the train and resume their life essentially as before.

For humanity it will be different.

[1] *This text is published in English for the first time here. Dennis Meadows' original French preface can be found in Meadows et al. (2022, 5–13).*

Global society will be on the post-growth descent for more than a century. The path is uncertain, and many will suffer during the journey. Some possibilities still exist for marginal influence over the process of decline, but civilisation is definitely moving towards a condition very different than where it was before riding the growth train

My MIT team neither imagined nor suggested that any single one of our 1972 computer model simulations was a prediction for the precise future path of growth in the global system. However, over the past decade several independent studies have compared our principal projections with the historical paths of important global indicators. The studies concluded that our business as usual scenario (BAU, fig.1) approximates the major historical trends over the past fifty years. Thus that scenario has become an influential paradigm through which I interpret current events and anticipate the future. Its main features will be reflected in the thoughts I present here.

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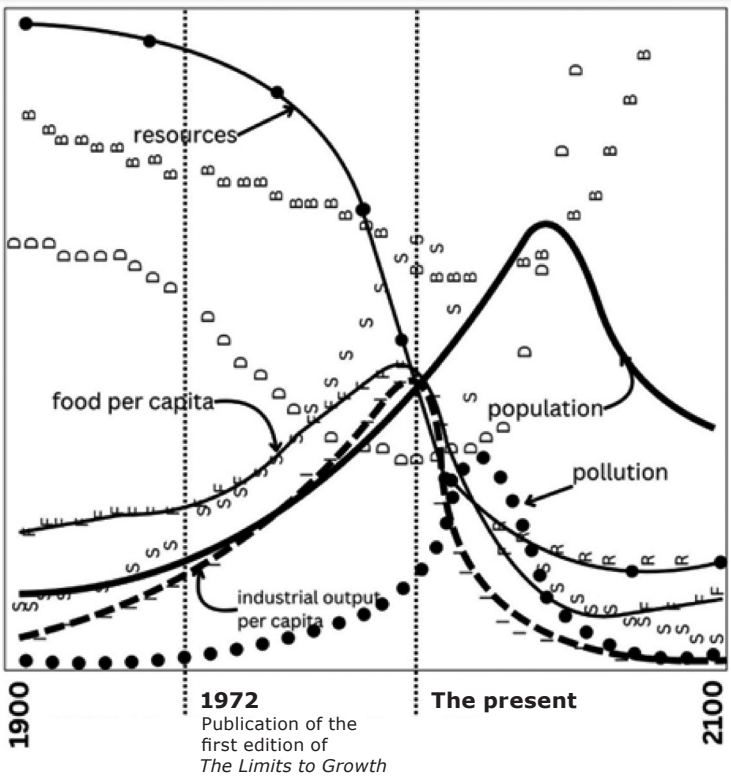


FIGURE 1. *The BAU scenario (fig. 35 in the first edition).*

Our analyses for the Club of Rome were conducted to understand the causes and consequences of physical growth on a finite planet. We focused on five indicators of that growth—population, industrial output per capita, food per capita, non-renewable resources, and persistent pollution.

Their growth could not continue forever. We foresaw that the expansion of each would be forced by planetary boundaries to slow and then reverse. We did not attempt to provide insights about the conditions that will arise on this planet during the decline. Our reports deliberately avoided making even a single speculation about the conditions of the world after the parameters we studied had each risen to their maximum values.

But it is important to speculate about those conditions now, because they will imminently confront humanity.

I believe that global society is entering an extended period during which its demands on the resources of this planet will be reduced by a variety of physical and social processes. Those demands will be forced back down to levels that can be borne by the earth. I do not know the precise timing or identity of the events that will make that happen, but I expect they will have four features.

First, I expect that the forces opposing physical growth on this planet will become most intense over the next several decades. This may seem counterintuitive. Looking at the BAU scenario above, it is natural to conclude that the forces constraining growth will be most severe during the steepest part of the descent - some decades from now. Unfortunately, that is not true. In order for growth of any factor to reverse, the forces opposing its expansion must grow larger than those supporting it. The forces supporting growth are greatest now, while the world is still relatively wealthy, and its peoples and institutions still share the desire for ever more growth.

An example is the enormous amount of money that was printed in the desperate effort to sustain economic growth during the first years of the pandemic. There will be neither the political will nor the practical capacity again in the future to provide such stimulus. Once physical decline becomes widespread the forces attempting to sustain growth will be weaker, and humanity will also experience the opposing forces as weaker.

Thus it is the present generation that will experience the greatest traumas from the various forces that cause decline in population and productive capital.

For population to decline, the death rate must exceed the birth rate. Attempts to reduce fertility have become politically unacceptable. Those blocking attempts to reduce fertility are implicitly choosing to rely on rises in the death rate for the inevitable transition. For production to decline, the depreciation of productive capital must exceed the investment rate.

Attempts to reduce investment are generally unacceptable. Thus capital depreciation will rise. Until more attractive alternatives are pursued, the stock of productive capital will mainly be reduced by climate change, technological obsolescence, and war.

Second, I expect that the various environmental and social factors that arise to force the physical dimensions of our global society—among them population, food production, and resource extraction—back down

to bearable levels will be regarded and treated as separate problems. Each of them will call forth local concerns and short-sighted efforts.

Climate change is an excellent example of this. Nations are mostly concerned about its effects within their own borders. And their responses are formulated out of narrow, short-term national self-interest.

But phenomena such as changing climate, spreading viruses, growing food shortages, rising energy prices, and mounting levels of persistent pollutants in the environment will not be eliminated by suppressing their symptoms. Consider the example of cancer. Often a person hosting a cancer will be in intense pain. It may be useful to give the sufferer a pain killer, because it will make them feel better in the short term. But that does not solve their problem. Pain is only a symptom of the real problem, which is cancer. Unless the cancer is removed, the patient will not be cured.

For the globe, physical growth in population and resource use is the cancer.

Third, I expect that as the inevitability of the end of growth becomes more widely accepted, there will be a shift in emphasis from preventive measures at the global level to adaptive measures at the local level. The goal of global sustainability will give way to the goal of local resilience.

Sustainability is a goal of the global system. The term is effectively used to describe a world in which the rich keep what they have while the poor are allowed to become richer. In a world where resource consumption is far above the regenerative capacities of the planet that is not possible. In (Meadows) 1999 I already wrote an essay for Süddeutsche Zeitung, arguing it was already too late for sustainable development. Thus sustainability is impossible and efforts to achieve it are causing frustration.

Resilience is a characteristic of the global system's behaviour. It is the capacity of the system to absorb shocks and still continue to produce essential results, such as food, housing, health, and employment. Efforts to achieve resilience can be productively undertaken at all levels—personal, family, organisation, community, region, globe.

Sustainability is a global goal that could only be achieved by agreement and sustained, concerted action by all the globe's important players. That will never happen. Resilience is a local goal that can be achieved by individuals through short-term, local action. It is already happening.

A system is not sustainable unless all its components are sustainable. A system becomes more resilient every time one of its components becomes more resilient. I consider the quest for resilience to be the most exciting and productive intellectual challenge of humanity over the coming century.

My fourth expectation is that the decline required to bring global society back within its limits will be occasioned by enormous political change.

The biggest threat of declining growth will be to the social fabric. The promise of indefinite growth—more for everyone forever—has been the single largest contributor to the social cohesion necessary for effective governance. In a system where every participant expects eventually to have more, it is possible to reach a consensus even for actions that some expect will give them less in the short term. But when everyone understands that growth is no longer possible, when life is perceived to be a zero-sum game—where one can get more only if another gets less—then consensus disappears. No governance system will be able to accomplish necessary changes, because those who expect to get less will block action.

Acknowledging this general fault simply recognises reality; it does not imply a personal preference for one form of governance over another. It is obvious that none of the globe's present governance systems are effectively coping with long-term global problems, such as rising persistent pollution, growing economic inequality, the spread of nuclear weapons, or climate change. This is not a failing unique to the democracies. Every political system is failing to resolve these global problems. The quality of natural resources is deteriorating on every continent and in every nation.

Human groups have employed many different forms of governance during the several hundred thousand years our species has lived on this planet—monarchy, democracy, oligarchy, theocracy, aristocracy, and numerous others.

Any of these different governance systems could potentially produce a more attractive future for humanity if they reflected a concern for equity, environment, resilience, and welfare and considered impacts that are distant in time and space to be as important as those that are proximate. No governance system will produce an attractive future if it is dominated by people who are self-centred, corrupt, short-sighted, or ignorant.

Fifty years ago I naively thought that our report would promote a longer- term view among decision makers. It obviously failed in that. However, this report has convinced many thousands of its readers around the world to change their views, their educational goals, even their careers in order to pursue a more constructive social response to the problems of growth.

They are an important resource in the effort that lies ahead. An understanding of the fundamental causal mechanisms described in our report will aid them in pursuing the best available remaining options.

With children there is no confusion about the difference between physical growth and human development. Each is useful at an appropriate time.

Initially growth is important, and parents are happy to watch as their children grow larger. Bigger is considered to be better in the early years. But as they mature into their mid-teens people are no longer expected to

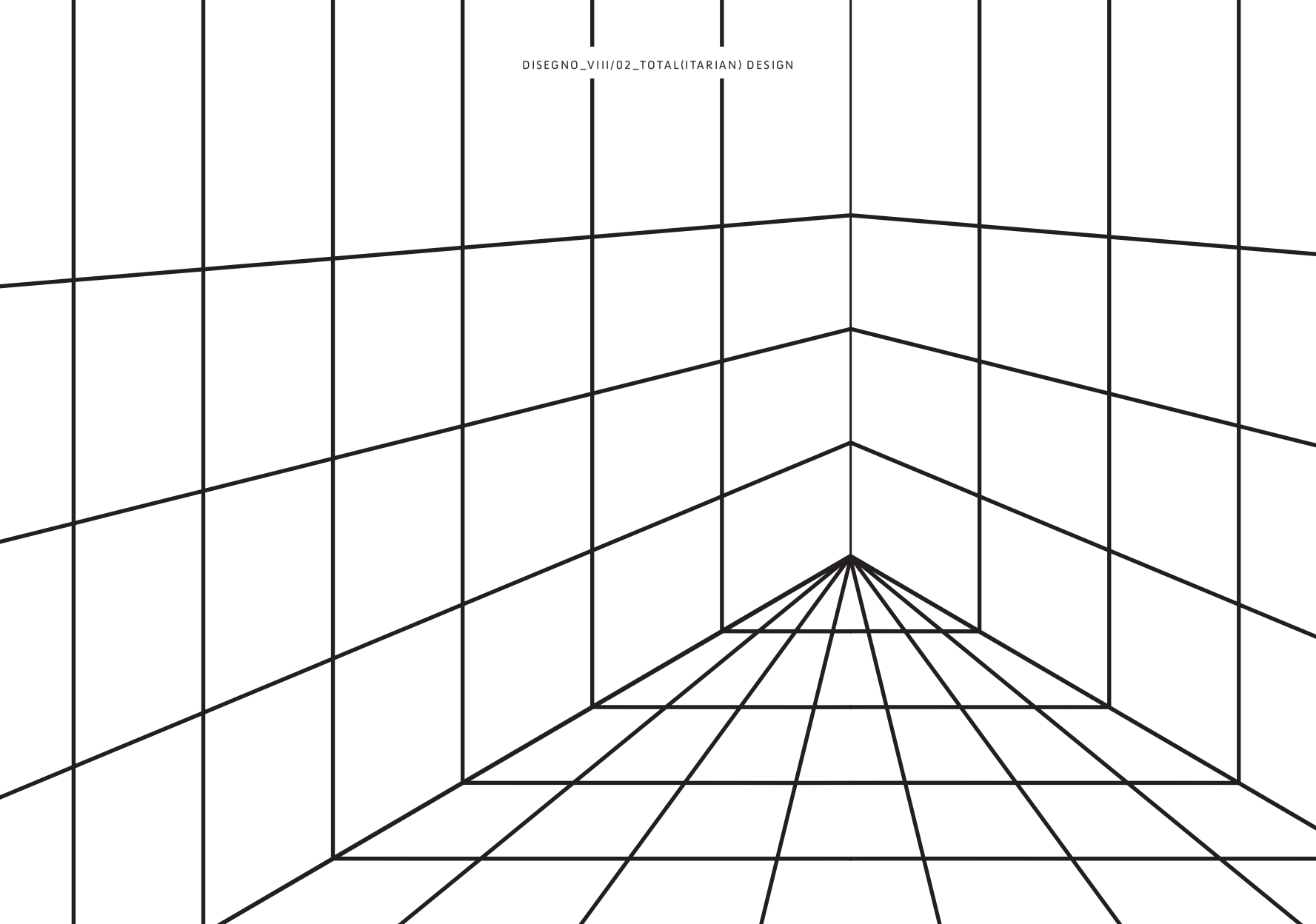
grow ever larger. Indeed, continued growth at that stage is a matter for concern. Instead parents value non-physical development—self-awareness, social relations, professional competence, formal learning, athletic prowess, musical skills, artistic expression.

Global society has not yet understood the distinction between physical expansion and qualitative development. It has passed the stage where more physical expansion is desirable. No widely shared global goal is now served by having more people or material goods. Now it is important to

learn how to advance the development of our species—achieving equity, peace, psychological balance, physical health, environmental quality.

If that is achieved, then on the hundredth anniversary of our original report, someone will be able to write a book entitled There Were No Limits to Development.

REFERENCES

Meadows, Dennis. 1999. "Der Kaiser ist längst nackt." *Süddeutsche Zeitung*, November 13.

Meadows, Dennis, Donella Meadows, and Jorgen Randers. 2022. *Les Limites à la croissance (dans un monde fini).* Paris: Rue de l'Échiquier.