diid
disegno industriale › industrial design

The single-subject issue no. 66 of Diid offers an articulated reflection on the processes of "*subtraction and addition*" of values, meanings, signs, information, languages, functions, materials, technologies, skills, and visions. The various contributions offer design scenarios touching on the proposed theme, associating it with aspects of the contemporary in which tangible and intangible are reflected in the development of digital technologies on the one hand and the centrality of the disciplines of user experience and service on the other. Subtraction is valued as substitution with intangible practices, in which the digital element prevails. Addition is proposed as taking responsibility and expanding design's fields of interest. Many of the contributions investigate fertile scenarios and are addressed to those who study, are interested in, and work in the world of design, and represent an opening to and stimulus for new design possibilities.

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Design Substraction and Addition

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Design Substraction and Addition

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Less, more or plenitude?
Design in the age of plenitude

Design, as practice and discipline, was born and substantiated in the productive dimension of the industrial society. A dimension that has changed due to the social, economic and technological and cultural changes. When the famous phrase "less is more" was coined, Mies van der Rohe considered the '900 the age of the economy, of science, of technology where nothing more could happen that was not observable by man. In this condition, Mies evoked order and rationality as the true expression of the era to which the design action had to respond, just as in the past it had responded to other "expressions". Thus, the "less is more" by Mies, since its enunciation, exceeded the limit of simplicity against complexity, or aesthetic and formal minimalism against decorative richness. Above all, it was an exhortation to the need to respect order and rationality that as such could not accommodate more than what they envisaged in their structure. Years have passed and many different boundary conditions and this declaration of intent by Mies has never been forgotten either to bring it to the fore or to refute it, always and in any case declining it to specific opportunities. If we want to reopen the question, as this issue of DIID wants to do, freeing the reflection of the conjunction particle between the concepts of less and more, in the field of artefact design we have to evaluate the specific context in we are working in: in order to understand what less and more are today, and if, as this contribution will try to analyse, there is another quantitative condition, capable of paradigmatically subverting the meaning of the terms.

[production-consumption, needs-desires, usefule-futile]

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Less is more: the design rationality of the '900

What is called "mass society"[1] takes shape between the end of the 19th century and the beginning of the 20th characterizing the entire century. It happened with the rise of the industrial society, the mass production and the typical consumption market of Taylorism and Fordism.

In this context, what has been called Modernism Movement born, including all the principles and practices involved in the construction of the anthropic systems: from architecture to engineering, to the project of industrial production. A movement of insightful revision of the design features, methods, and objectives; where the protagonists'work and though have directly influenced the art, the architecture, the urban planning, and the industrial design of the entire last century until nowadays. Certainly, one of these protagonists was Ludwig Mies van der Rohe and his firm conviction that in designing the "less is more"[2] has become the key concept with which the whole Modernism has been read and interpreted; and as a consequence, all the different anti-modern or post-Modern Movements have focused on this concept to criticize the Modernism.

These are the fixed premises that we have to take in consideration if we have to reflect and update the concept of "less is more" within of the contemporary condition of Design. Mainly, those premises help us to highlight how the apparent aesthetic minimalism recognized in the Mies sentence of "less is more" turns out to be a facile reading of the modernism design dimension; while Mies tried to validate it within the social, cultural, economic and productive features of his contemporaneity.

A contemporaneity that was, during the twentieth century, characterized by the already mentioned "mass society".

In fact, contextualizing this statement in Mies van der Rohe's more articulated design thought, it is clear that "to reduce by maximize" was (and is) a concept linked to the ethical dimension of production and consumption in post-war western society.

In particular, in the post-war period, where the imperative was to rebuild a society primarily through its objects, aim was to distribute well-being not to a privileged elite but to the totality of people; and to make the best use of the intellectual, material and human resources increasing the number of artefacts capable of responding to the needs of the many.

For this purpose, Mies van der Rohe evoked the need to lighten, reduce and remove from the project any trappings, whether aesthetic, technical or functional.

This interpretative key of the Mies's thinking places him in a sort of elective continuity with what Adolf Loos had already claimed with his equally well-known sentence "ornament is a crime".

Although mainstream criticism focused on the aesthetic dimension, Loos substantiated its social, economic and productive aspects. In fact, he wrote:

The relationship between the earnings of woodcarver and a turner, the criminality low wages paid to the embroideress and the lacemaker are well known. The ornamentor

ha to work twenty hours to achieve the income earned by a modern worker in eight. Ornament generally increases the cost of an article; nevertheless, it happens that an ornamented object whose raw material cost the same and which demonstrably took three times as long to make is offered at half price of a smooth object. Omission of ornament results in a reduction in the manufacturing time and increase in wages. The Chinese carver works for sixteen hours, the American worker for eight. If I pay as much for a smooth cigarette case as for an ornamented one, the differences in the working time belongs to the worker. And if there were no ornament at all – a situation that may perhaps come about in some thousands of years – man would only have to work for four hours instead eighth, because half of the work today is devote to ornament. (1908)

With the same approach, Mies van der Rohe wrote just 15 years later:

We know of no formal problem, but only construction problems. The shape is not the end, but the result of our work. […] The end is shaped like formalism, and we reject it. […] The will is formalist style. We have other concerns. We would substantially liberate the practice of building from the aesthetic speculation, and to bring the building to what needs to be exclusively". (1923)

Thus, the reduction (less) as an effective way for maximization (more) becomes a form of the rationality of almost economic nature with which mass society of the twentieth century was realized.

Less or more: the uncertain dimension of contemporary society
Without having to reopen the "post-modern question" here, we can share the observation that from the second half of the 20th century until the beginning of our century the various crises – political, economic, social ones – have definitively denied the efficient rationality of the "less is more".
And if, once again, this denial finds its most evident expression in the aesthetic dimension of post-modern languages, in fact, what was being revealed was how the Miesian "less is more" could not be more sufficient to respond to the complexification of the cultural, economic and environmental context in which the project act was called to act.
To understand this critical reading, we can be helped by the work of three authors who have opened up, with certainly different weights and visions, to a different dimension of design, from an evolutionary point of view.
We are referring to "Design for the Real World" by Papanek (1971), "*Artefatti*" by Manzini (1990) and "In the Bubble" by Thackara (2005).
Beyond the environmentalist key, what is worth highlighting in these works[3] is the awareness of a complexity that can be understood and addressed only for small parts and no longer as a whole, losing the maximalist, positivist and rational push on which have substantiated the concept of "less is more".

The complexity described by these three authors – albeit in the temporal and therefore cultural specificity in which their thinking takes shape – becomes not only a condition but also a justification of every possible variation of the design process where the "less" (subtraction) and the "more" (addition) are no more opposite factors but coexisting according to subjectively established weights and measures.
Of this complexity, even a deeply modern author like Tomás Maldonado (1991), feels the need to take it into account by writing:

Design […] is, therefore, part of a complex process of defining the structure, the form, the use, the material and productive characteristics, the symbolic cultural and social sense that designer has to negotiate with other stakeholders in a process of continues historical evolution (which includes both the artefact and the system that specifies it). (1991)

In particular, in front of the acceleration of the processes of technological innovation and socio-cultural transformation, a substantial condition of weakness of the design action is highlighted.
In the context of "less is more", every innovation was disruptive but (apparently) controlled because still inserted in a systematic dimension of learning and doing. Gradually, according to a process of exponential growth, technologies have amplified the possibilities of experimentation and innovation, therefore, the production has set aside the need to give shape to reality as Mies expected, for a self-referential legitimation.
As a result of this incessant process of technological production, there has been the uncontrolled increase in the number of available products, designed to stimulate latent desires rather than to respond to evident needs.
And so, the artefacts stop to be, as the modern thought of mass production hoped, a response to the demands of society to become stimulators of new social practices ever more articulated, specific and individualized.
In the complex society narrated by Papanek first and then by Manzini and Thackara, artefacts are inserted and constitute increasingly dense micro-organizations within a multiform system of people, geographical locations, times, usefulness, meanings.

Less plus more: "the plenitude"
To describe the contemporary reality of these micro-organizations built around increasingly technologically determined artefacts, Rich Gold uses the concept of plenitude: a dense ecology of things thought and produced by man, which he calls "*the stuff of the junk tribe* "(Gold, 2007; p.3)
According to Gold, the relationship in between contemporary society and its artefacts is based on a condition of saturation and disaffection: we live in the civilization of the thousands of things that easily become "junk" losing their utility.
When, nowadays, we use an object we have no way of knowing who made it, where it was manufactured, how was the work that produced it and what was its path to get to the shop where it was put up for sale.

If before the advent of production designed for mass society, things had a history – more or less – knowable, today they are empty boxes that are filled with meaning only in the act of consumption.

And this is not a distributed process. It is established that those who live in Europe and the United States today (which are around 12% of the world population) consume 60% of the world's goods.

According to a study[4] carried out a few years ago, there are about 300 thousand objects in a home in the United States; while in the United Kingdom, according to another more recent study[5], a ten-year-old child comes to own more than 200 toys but plays with just a dozen of these.

Before the advent of mass society and production, the common man lived using few things, really necessary, obtained from his work or from the work of someone who knew himself directly, and, for their utility, these things were kept as long as possible. Today, we tend not to give particular meaning to the objects that surround us and many of them are designed to be thrown away, replaced, without the possibility of repair if they are damaged. (Caparrós, 2018).

The purchase rather than use has become the action that gives value to the artefacts we use.

And the economic system based on mass production and consumption feeds itself into this process of continuous renewal of artefacts.

Suffice it to say that if we suddenly stopped designing, producing, buying and consuming the number of artefacts (even immaterial) that surround us, millions of people – workers, entrepreneurs, employees, entrepreneurs, vendors, entrepreneurs – would lose their role in the social and economic system.

There is an interesting production history that clearly represents this new dimension, and which is worth reporting here. We are talking about the very recent evolution of two large companies in the eyewear industry.

The glasses are a very particular product because, at the same time, they represent a medical device that we would like to do without and a fashionable product that we wish to possess.

The global eyewear industry, worth around €120 billion, is built on this dual nature of eyewear called "romancing the product": in order to have an object that has a production cost around the fifty euros, in the most luxurious versions, consumers are willing to pay sums ten or twenty times higher

The diffusion of glasses takes place two centuries after its invention in the 200s in Italy, with the birth of the press in Germany, because people wanted to read.

Furthermore, glasses are a product that has very specific market characteristics. In fact, if until the end of the 19th century glasses could be bought either in a department store or by a jeweler or on a street vendor, with the development of optometry, at the beginning of the 20th century, a new profession was born which, like the pharmacists, gradually have obtained an exclusive on the sale validated by laws and regulations to assure the quality control and the health guarantee.

For millennia human beings had read and written mostly without the help of glasses, but within the last two centuries we have become a "species that wears glasses".

This need varies from place to place because different populations have different genetic predispositions to deterioration of sight. And now it is now a widespread reality: in mature capitalist countries, it is estimated that more than 70% of adults need corrective lenses and the number of eye tests that turns into sales (what is called capture rate) is around 60%.

Moreover, in recent years it has been discovered that even the way children grow up can damage their eyesight.

It is expected that by 2050 half of the planet's population, about five billion people, will be myopic: a real "myopia epidemic".

An effect already evident, for example, in China wherein the fifties it is estimated that the myopia was just 10-20% of the population while today it is almost 90%. In Seoul, 95% of 19-year-olds do not see from afar.

Furthermore, for populations with fewer economic possibilities - especially India and Africa - there is what is called the "visual gap": about 2.5 billion people would need glasses but do not have neither the possibility to have a medical examination and to buy glasses. (Mariotti, *et al.*, 2015)

In this scenario, over the last few decades, two companies have arrived to dominate the market.

Essilor, which produces lenses, is a French multinational that controls almost half of the sale of prescription lenses in the world and has bought 250 companies in the last twenty years.

The Italian *Luxottica*, that produces the frames, is a company with a unique combination of factories, brands, and retail outlets. *Luxottica* was a pioneer in the use of luxury brands in the eyewear industry (such as *Ray-Ban*, *Vogue*, *Prada*, *Oliver Peoples*). The largest chain of glasses sale in the USA *Lens-Crafters*, as well as the UK John *Lewis Opticians* and *Sunglass Hut*, are owned by Luxottica.

It is estimated that around 1.4 billion people worldwide use Essilor and Luxottica products. In 2017 the two companies had a number of customers close to those of *Apple* and *Facebook*.

Now they are becoming one: a single multinational company called EssilorLuxottica[6]. The declared "mission" of this new global company is to control "the visual experience" in the future, supplying glasses to the entire planet (Knight, 2018).

This brief history is exemplary, both in production and consumption, of what Gold meant by his "plenitude" and makes us understand how the design act is faced again with the need to understand and then choose the "measure" of their own actions.

An understanding and a choice that, due to the complexity of the system in which the micro-organization of objects are determined, can hardly be solved thanks to a single paradigm, be it "less" or "more".

In fact, on one hand, we are still faced with the most obvious expression of that "mass" condition which, as Mies hoped, requires the rationality of "less is more" and

where the optimization of design production is aimed at consumption maximization towards an ever-larger number of people.

While, on the other hand, consumption is increasingly recognized as a subjective and isolated action, capable of accepting both the condition of "reduction" (less) – by looking for the substance in the economic and productive optimization of the object – as well as the condition of the "multiplication" (more) – chasing an emotional and aesthetic satisfaction offered by the innumerable versions of the product.

These are the obvious signs that the design action is today moving in a different condition. A condition of which at the moment the only awareness is that of uncontrollability, a sort of "interregnum" (Bordoni, 2017) between the past situation and the future one. An uncontrollability that economists, in particular, had already tried to decipher through the so-called "VUCA" model, which stands for "Volatile, Uncertain, Complex and Ambiguous" (Bennett & Lemoine, 2014).

In the Goldian "plenitude" the condition of Volatile and Complex are referred to the concept of "more" because the first refers to the speed of changes, which are not only technological but also cultural and consequently political, and the second one is determined by the number of factors we have to take in consideration and by the variety of their relationships. At the same time, the condition of Uncertain and Ambiguous refer to the concept of "less", because the first refers to the extent to which we can predict the future, and the second highlights the risk of having increasingly incomplete and contradictory data, information and knowledge.

Therefore, for the design act remains only to seek a different measure of its own action that sublimates the quantitative dimension of the "less" and the "more" and of the mass society and production.

The current condition, although still far from having found its own definition and its crystallized nature, is clearly requiring Design to have a new paradigm able to pass to a qualitative dimension of its own action, in one word, to become a *Design for Plenitude*.

[1] The concept of "mass society" is faced from different disciplinary points of view, from the more political to the sociological ones; in the latter, it is possible to re-read the aspect linked to the relationship between production and consumption and also field the role of design.

[2] The motto "Less is More" is attributed, by different historians and critics, not as an original by Mies van der Rohe but as a quote that he made from others (the architect Pether Behrens, the poets Robert Browning and Christoph Martin Wieland). Buckminster Fuller has also adopted this statement in the form of "Doing more with less" with a more evident reference to technological rather than aesthetic aspects.

[3] It is correct to specify how these three authors make no explicit reference to the work of Mies van der Rohe, but in our opinion they contribute with their work to tell a social, cultural, economic and technological condition, extremely different from that in which one substantiated the modern vision of "less is more".

[4] MacVean, Mary, "For many people, gathering possessions is just the stuff of life", Los Angeles Times. March 21, 2014.

[5] In https://www.telegraph.co.uk/science/2017/12/05/many-toys-bad-children-study-suggests/

[6] Although this joint-venture is not considered a monopoly, because Essilor controls 45% of the prescription lenses market and *Luxottica* accounts for 25% of the frames market, the new company will be worth around sixty billion euros and will sell more or less one billion glasses per year and have 140,000 employees.

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Think
gallery

Reducing and adding

"Indeed, many of the artefacts produced in modern society are not artefacts which protect man immediately from the forces of nature (like raincoats, or even houses); but are artefacts which enable him to deal with other artefacts (like tin-openers, or pencil sharpeners), or, more importantly, artefacts which help him deal with other men (such as books and telephones, or money). Instead of imagining man and his natural environment as interacting and this interaction being mediated or buffered by material artefacts, it would be more reasonable to present a picture of civilised man as living in an environment largely of his own creation, constituted by artefacts, with the natural environment existing alongside or else outside and beyond this man-made world". (Philip Steadman, *The Evolution of Design*, 1979).

The images that make up the gallery on the following pages seek to investigate the complex relationship, on the one hand, between the material reduction of experience and the augmented meaning and cultural value of the industrial product, and on the other between the complexification and morphological articulation of the object, and the simplification and streamlining of the conception and production process.

These issues are now equally central to human-made contemporary production, and indissolubly linked to the economic, social, and environmental challenges that await us. Redesigning the environment that surrounds us means seeking once again a synthesis between nature and artifice, in a context characterized by the need to generate new sustainable lifestyles and, at the same time, by the need for our material ego to be satisfied.

The selected objects then aim to encourage the reader to make a critical reflection on the concept of tangible and intangible value.

Jacopo Mascitti

[nature, artifice, design, value]

01

Italian-made minus and plus
>
The relationship between fertile design and the reduction (or scarcity) of material and, at the same time, between linguistic synthesis and aesthetic articulation profoundly marked twentieth-century Italian Design, making it recognizable to the world, and a hallmark of cultural identity.

02

03

01 *Crosby,* Gaetano Pesce, 1998.
02 *Mezzadro*, Achille Castiglioni, 1957.
03 *Proust geometrica*, Alessandro Mendini, 1978.
04 *Superleggera*, Gio Ponti, 1955.

04

01

**The added value
of minus and plus**

>
Contemporary design takes on meaning by valorizing the context of the design more than of the product, emphasizing the elementary gesture that creates the new and reconstructing the complexity of nature in simple, mathematically describable and emotional forms of processes.

02

03

04

01 *Damned.MGX*, Luc Merx, 2009.
02 *Autarchy*, Formafantasma, 2010.
03 *Putrella*, Enzo Mari, 1958.
04 *"Zig Zag" chair from the "Where There's Smoke" series*, Maarten Baas, 2004

01

Innovation between subtraction and addition

>
The innovation process is methodologically articulated in the search for a profound meaning to be attributed to the environment we are surrounded by, in order to reconstruct it by subtracting access and generating complex experiences capable of improving men and women.

02

03

01 *Mine Kafon*, Massoud Hassani, 2011.
02 03 *TobeUs*, Matteo Ragni, 2008.
04 *Chest of drawers*, Droog, 1991.

04

More simple, less easy; more easy, less simple
>
Identifying the simple and easy in contemporary material culture, although it never was utopian, becomes so for the common people. Once there is no direct relationship between design and object, what remains is the added value of material, experiential, and cultural complexity.
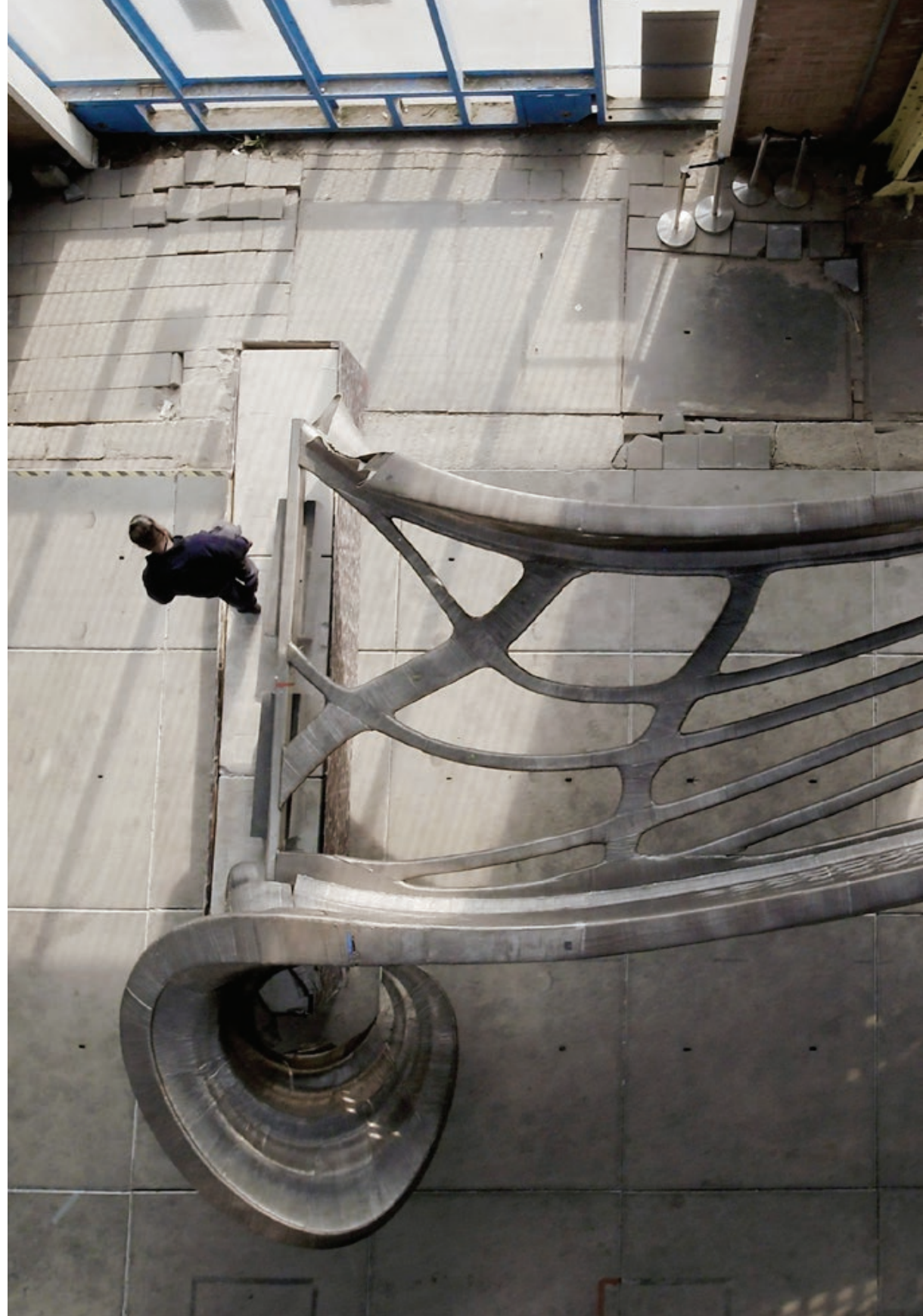
01 *3D printed bridge*, Joris Laarman, 2018.
02 *RosAria*, JoeVelluto, 2002.
03 *ProAesthetics-Victorian*, Lanzavecchia-Wai, ProAesthetics for Masters Thesis Project, 2008.
04 *3D printed bridge*, Joris Laarman, 2018.

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