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# Do-It-Yourself Design in Times of Oil Crisis: From *Nomadic Furniture* to *Metamobile* (1973–74)

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## Abstract

This paper explores some of the consequences of the 1973 oil crisis on Western industrial design. Between 1973 and 1974, on both sides of the Atlantic Ocean, designers reacted to the uncertainty caused by the energy crisis with an unprecedented fascination for do-it-yourself solutions. This article discusses Victor Papanek and James Hennessy's *Nomadic furniture* (1973–74) and Enzo Mari's *Proposta per un'autoprogettazione* (1974), produced by Dino Gavina within the Simon International *Metamobile* series in the same year. The scope of this essay is to understand to what extent this sudden surge of interest in DIY furniture design, in the USA and in Italy, can be explained within the historical framework of the 1973 oil crisis.

## Keywords

DIY design

1973 oil crisis

Victor Papanek

Enzo Mari

Dino Gavina

## Introduction

The oil crisis which shook the Western world in 1973 — a direct consequence of the oil embargo fostered by the Organization of Arab Petroleum Exporting Countries — can be considered as a watershed for the history of Western economies. The resulting energy shock marked the abrupt end of the so-called *trente glorieuses*, the three decades which followed the end of the Second World War and went along with the economic boom of many countries in Western Europe. The sudden rise in the price of oil had a dramatic impact on Western economies, which relied heavily on oil as their major source of energy (Judt, 2005, pp. 453–58). Italy was particularly hit by the energy crisis. Its overdependence on oil was the cause of the highest inflation rate among the Western countries throughout the 1970s (Ginsborg, 1990, p. 352). The sudden impact on the energy sources influenced all aspects of economic and social life. Several policies of austerity were implemented, such as the *domeniche a piedi*, a ban on the use of private motor vehicles on Sundays, in place between December 1973 and April 1974. Despite their short-lived applications, the introduction of these rules had a long-lasting effect on the collective perception of the crisis by the Italian population, and they were even portrayed in comedy films such as *Convieni far bene l'amore* by Pasquale Festa Campanile (1975).

The oil shock had immediate effects on the Western architectural and design culture, especially in the United States. Sparked by the necessities caused by the crisis, architecture and design rapidly embraced the new economic and energetic challenges. Although experiments on solar houses date back to the early Post-war years (Barber, 2016), a great variety of technologies — including solar panels and wind turbines — began to be applied to the domestic sphere as a consequence of the 1973 crisis. The event prompted Western designers to interpret architecture within a framework that underscored energy and costs (Zardini & Borasi, 2007). Similarly, the oil embargo influenced the development of high-tech architecture: architects were forced to consider the energy consumption of their projects (Davies, 2017, pp. 406–07). A striking example is Richard Rogers's Lloyd Insurance Building in London, whose design was heavily influenced by the necessities of energy conservation (Calder, 2021, pp. 409–11). However, as Barnabas Calder suggests, “for the architecture and construction industries in general, the effects of the oil crisis tended to be more intellectual and economic than ecological” (2021, p. 414). If the influence of the energy shock on the architectural debate was evident, what were the consequences of the 1973 oil crisis on the discipline of industrial design? This paper analyzes the direct and indirect repercussions of the oil shock on furniture design, between Italy and the United States, with a particular focus on do-it-yourself (DIY) proposals. Often interpreted as a “democratizing agency” (Atkinson, 2006, p. 6), the paper will explore how DIY designs could fit within the new economic and political atmosphere created by the 1973 energy crisis.

## On Resources and Waste Disposal: Design and Ecological Awareness

An increasingly acute awareness of ecology and the human relationship with the environment had been developing for a decade before the outbreak of the oil crisis. In 1962, Rachel Carson published *Silent Spring*, a successful and impactful accusation against the use of pesticides, which may be seen as the starting point of eco-criticism (Carson, 1962). A decade later, the impossibility of ever-increasing economic growth became evident: *The Limits to Growth* report was published in 1972 and altered mankind's ambitions for an endless consumption of the earth's resources. By the late 1960s and early 1970s, a growing environmental consciousness could already be perceived in design publications. Richard Buckminster Fuller's *Operating Manual for Spaceship Earth* (1969) underlined the limited resources available within a finite system and criticized the use of fossil fuels. Published one year after *Earthrise*, William Anders's photograph of the planet taken during the Apollo 8 mission, Buckminster Fuller seemed to have been vastly influenced by the power of that image and claimed that "We are all astronauts" (Buckminster Fuller, 1969, p. 46). Fig.1

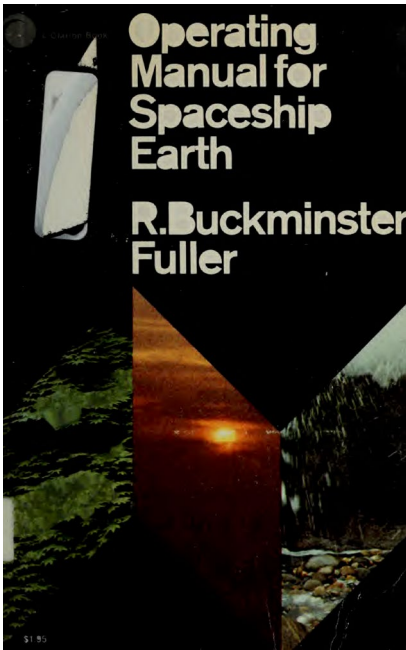


Fig. 1  
Book cover of Richard  
Buckminster Fuller's  
*Operating Manual for  
Spaceship Earth* (1969).  
Archive.org, public  
domain.

In 1970, Tomás Maldonado published *La Speranza progettuale: Ambiente e società* (translated as *Design, Nature, and Revolution: Toward a Critical Ecology*). Maldonado complained about the disruption of the ecological balance caused by mankind, which would transform many swathes of land into uninhabitable territories (Maldonado, 1970, p. 77). He also tackled the issue of waste disposal, underlining the responsibilities of designers for the increasing quantity of waste generated by industrial production (Maldonado, 1970, pp. 71–75).

Among all, Victor Papanek was perhaps the most prolific and critically acclaimed designer who extensively published on the ecological responsibilities of design and the need to revolutionize the profession (Clarke, 2021). According to Alison J. Clarke, Papanek's *Design for the real world* (1971) is "one of the most widely read and influential design books of all time", which led many designers to "embrace social responsibility" in their field (2018, p. 27). *Design for the real world* was first and foremost addressed at placing the users at the center of the design process. At the same time, it fostered an acute criticism of consumerism and obsolescence, which stemmed from what Papanek called "our Kleenex culture" (Papanek, 1971). *Design for the real world* quickly became a "call for action" (Clarke, 2018, p. 28) for a generation of designers, merging environmental awareness, political stances, and an attention to social inequalities (Clarke, 2021, pp. 211–31). A direct result of the book's principles can be seen in two publications that followed, written by Papanek in collaboration with American designer James Hennessey: *Nomadic furniture* vol. 1 and vol. 2.

### "You Are Nomadic": DIY and Lightweight Furniture to Face Austerity

Published a few years after *Design for the real world*, during the oil crisis, *Nomadic furniture* vol. 1 and vol. 2 embody Papanek and Hennessey's design philosophy of sobriety, reuse, and inventiveness. Both volumes shared the subtitle *How to build and where to buy lightweight furniture that folds, inflates, knocks down, stacks, or is disposable and can be recycled – with many easy to follow illustrations* (Papanek & Hennessey, 1973; Papanek & Hennessey, 1974). Fig. 2

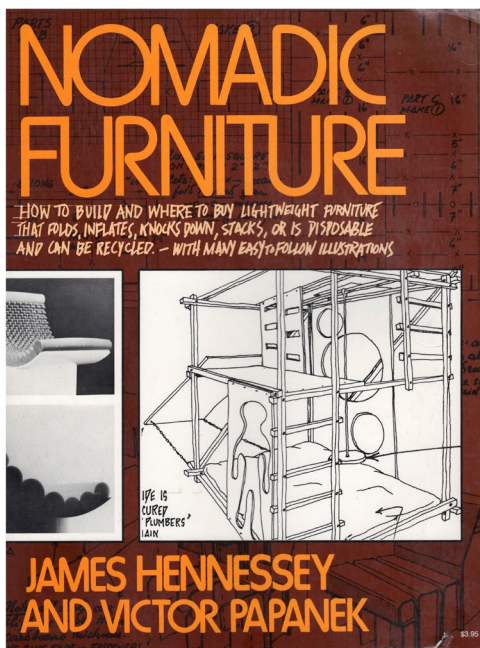
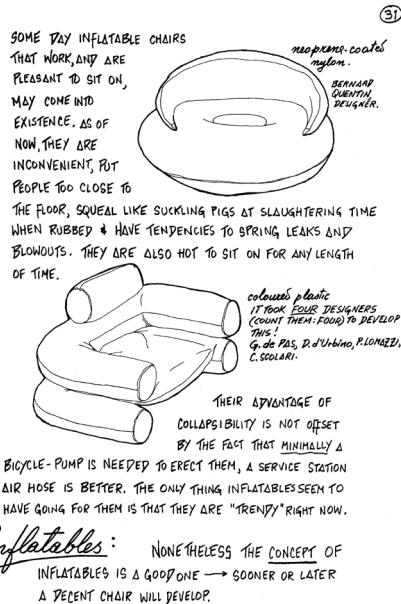


Fig. 2  
Book cover of Victor Papanek and James Hennessey's *Nomadic furniture*, volume 1 (1973). Archive.org, public domain.

According to the authors, a design is nomadic when it is made for people who are constantly moving from one house to another, in need of lightweight furniture which can be easily assembled and dismantled and would cost little to build. Influenced by the contemporary US counterculture movement, the volumes provided several ideas for DIY furniture to be easily and directly assembled by the users, with cardboard, cloth, or timber (Clarke, 2021, pp. 242–46). The scope of the volumes was clear from the very first pages: “You are not reading a book about design. Rather, this is a book to demythologize design and to make it available to people” (Papanek & Hennessey, 1974, p. 3). The political, democratic, and anti-consumerist stance was evident: DIY designs can be seen as a “‘hands-on’ political counterpoise to capitalist-dominated design culture” (Clarke, 2018, p. 43). The first volume of *Nomadic furniture* was published in 1973 and written between 1971–72; the second volume was published in 1974 and written between 1972–73, on the verge of the oil crisis. Despite making no explicit mention of the energy shock, Papanek and Hennessey’s sharp awareness of the sinister effects of a consumerist culture can be interpreted as a prophetic stance towards the looming crisis and the resulting times of austerity. DIY design seemed to be the only answer to the divide between the designer and the worker, which had been fostered by a capitalistic logic since the industrial revolution. Papanek and Hennessey’s DIY design proposals were part of a “low-tech” design culture which aimed at “overturning [...] the hierarchies of taste and design authorship” (Clarke, 2018, p. 43). Papanek and Hennessey were part of a larger network of counterculture-inspired designers: in the same years, Ken Isaac’s *How to Build Your Own Living Structures* (1974) and M. Paul Friedberg’s *Do It Yourself Playgrounds* (1975) were also published.

*Nomadic furniture* vol. 1 and vol. 2 seemed to be heavily influenced by the Italian design of the 1960s. The volumes included explicit references to Italian products, such as the “Sacco” bean bag (Papanek & Hennessey, 1973, p. 28), the “Blow” chair (Papanek & Hennessey, 1973, p. 31) and even the “Parentesi” lamp – an “incredibly nomadic lamp”, whose “very steep price makes it elitist, but its superb logic keeps it from being trivial” (Papanek & Hennessey, 1974, p. 56). The informal characteristics of Italian design were a source of inspiration for Papanek and Hennessey, echoing the fortune of the *Made in Italy* phenomenon and of Italian radical design in the United States, in the years that followed the 1972 MoMA exhibition *Italy: The New Domestic Landscape*, curated by Emilio Ambasz (Ambasz, 1972). Fig. 3



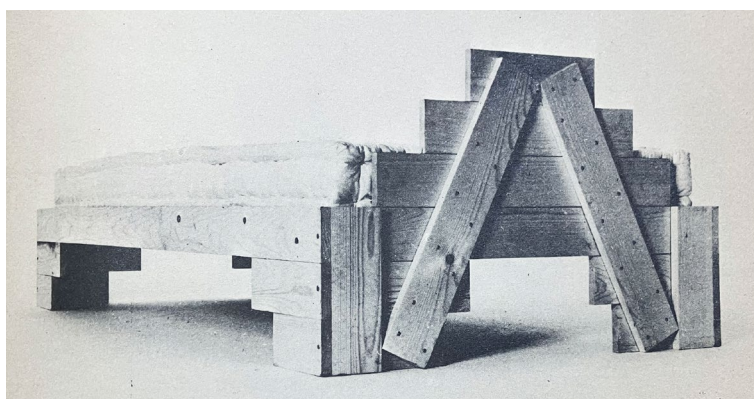
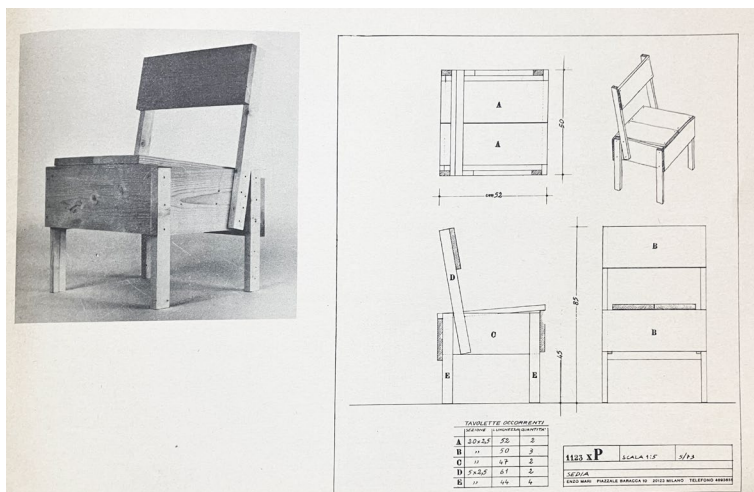
1  
"Un progetto per la realizzazione di mobili con semplici assemblaggi di tavole grezze e chiodi da parte di chi li utilizzerà. Una tecnica elementare perché ognuno possa porsi di fronte alla produzione attuale con capacità critica." Translation from Italian by the author.

Fig. 3  
Papanek's and Hennessey's fascination for Italian design. The "Blow" chair by Jonathan De Pas, Donato D'Urbino and Paolo Lomazzi (Papanek & Hennessey, 1973, p. 31). Archive.org, public domain.

### An Individual and Collective Exercise: From Autoprogettazione to Metamobile

If Italian design influenced the nomadic philosophy of Papanek and Hennessey, North American experimentations on lightweight, self-built and disposable furniture seemed to have an immediate impact on Italian design culture. One year after the oil shock and the first volume of *Nomadic furniture*, Enzo Mari proposed several DIY furniture designs during an exhibition held in Milan, titled *Proposta per un'autoprogettazione* (1974). Mari's vision was a "project for the construction of furniture through the easy assembly of unrefined planks and nails by the users. A basic technique so that everybody can critically face today's production"<sup>1</sup> (Mari, 1974, 1). As stated in the foreword to the 2002 re-edition of the catalogue, the term *autoprogettazione* cannot be translated as "self-design". It is better defined as "an exercise to be carried out individually" (Mari, 2002, 5). Like Papanek's *Nomadic furniture*, Mari's *Autoprogettazione* had an educational scope for the users: by means of self-construction, *Autoprogettazione* aimed to create a new collective feeling towards furniture design, cutting ties with the industrial world. As noted by Giulio Carlo Argan, "Mari [...] is now proposing an anti-industrial design" (Mari, 2002, pp. 34–35). Mari's proposal revolved around the idea of self-construction according to a series of technical drawings listing the numbers and dimensions of the timber planks needed. However, just like Papanek and Hennessey, Mari was interested in the personal creativity of the users and asked them to "send photos to his studio", especially if they implemented any variations to the original instructions (Mari, 1974). Fig. 4; Fig. 5.





The political and social power of DIY furniture design was not limited to Mari's exhibition in Milan. Its catalogue was curated by Centro Duchamp, a cultural society for the arts promoted by design entrepreneur Dino Gavina, who had founded the firm Simon International with Maria Simoncini in 1968. A key actor in the field of Italian industrial design, by the early 1970s Gavina had already become one of Italy's most influential and visionary design entrepreneurs, who attained worldwide recognition thanks to the re-edition of Marcel Breuer's tubular steel furniture, including the "Wassily" chair (Cacciola, 2022). After the success of the series *Ultrarazionale* (1968) and *Ultramobile* (1971), Gavina took a minimalist turn with the launch of the *Metamobile* collection in 1974, which revolved around Mari's *autoprogettazione*. The poetics of Mari's timber furniture were not lost on Gavina: one year into the economic and social austerity fostered by the oil crisis, Gavina embraced Mari's DIY designs with the aim of uprooting the idea of authorship in Italian design culture. According to Gavina, the scope of *Metamobile* was to look for "another direction, starting from scratch" (Mari, 2002, pp. 36–37). Its motto was ironically serious: "The rich must be freed from kitsch design for the rich; the poor must be freed from kitsch design for the



poor”<sup>2</sup> (Brigi, 1992, p. 87). *Metamobile* didn’t only include furniture by Mari, but also projects by Gavina’s longtime partners, such as Carlo Scarpa, Kazuhide Takahama, and Ignazio Gardella (Obrist & Giacomelli, 2020, pp. 141–51). The flyer claimed that everybody could reproduce the models for their own personal use and that “with the help of the design and a hammer, anyone can build this furniture”<sup>3</sup> (Brigi, 1992, p. 87). For Gavina, *Metamobile* was a way to reignite his passion for anonymous design, which had its roots back in the 1950s (*Atlante Gavina*, 2010). At the same time, it might have acted as an impactful answer to the economic and social uncertainties experienced by the Italian population during the energy crisis of 1973–74 and the resulting policies of austerity (Finessi & Miglio, 2014, pp. 184–95).

Despite the limited scope and fortune of *Metamobile*, Gavina and Mari’s proposal influenced another US publication, in what seems to be a transnational mirror reflecting ideas between the two sides of the Atlantic. Inspired by Gavina, whom he personally met in 1974 (Stamberg, 2019), the young architect Peter Stamberg published *Instant Furniture* (1976), a catalogue of “low-cost, well-designed, easy-to-assemble tables, chairs, couches, beds, desks, and storage systems”. The book was grounded in Gavina’s *Metamobile*, but further enlarged the collection with proposals by Gerrit Rietveld and Stamberg himself, among others (Bonazzi, 2023). Despite his successful career as an architect, together with Paul Aferiat, Stamberg continued to mention the key influence of Gavina in his later

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“Con l’aiuto del progetto e del solo martello chiunque è in grado di costruire il mobile”. Translation by the author.

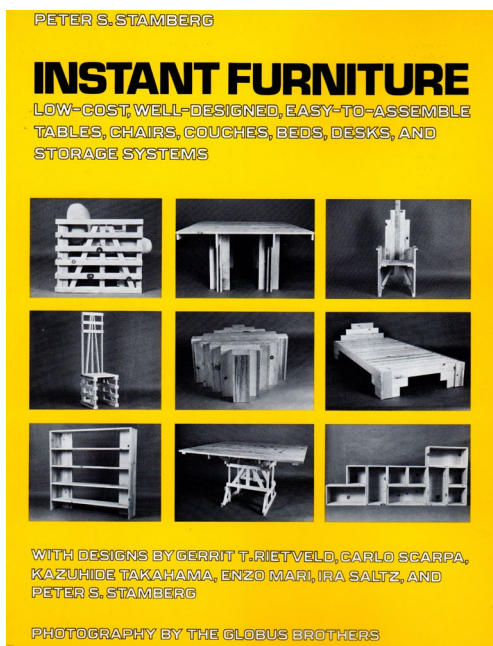


Fig. 6  
Book cover of Peter Stamberg’s *Instant Furniture* (1976). Courtesy of Alberto Bonazzi.

furniture projects (Stamberg Aferiat, 1997, p. 42). Fig. 6. Mari’s *Proposta per un’autoprogettazione* and Gavina’s *Metamobile* were part of a wider response to the ecological turn in the Italian design sphere. As Elena Formia claims, environmentalism and

ecological awareness played a key role in the development of radical design cultures in Italy throughout the 1970s (Formia, 2017). Among these experiences, self-construction projects were at the core of many Italian experimentations for a new environmental relationship between design and society, from Riccardo Dalisi's *Esperienza d'animazione* promoted with the inhabitants of the Rione Traiano neighbourhood in Naples between 1971–74 (Parlato & Salvatore, 2019/2020) to the didactic experiments of the Global Tools collective, launched by many protagonists of the radical groups (Borgonovo & Franceschini, 2018). Other authors embodied the austerity policies at a subtler level, promoting poetic reflections through sombre designs such as Ettore Sottsass's *Metafore* and Ugo La Pietra's *Attrezzature urbane* (Finessi & Miglio, 2014, pp. 208–23).

## Conclusions

As this article is being written, the Western world is currently facing energy challenges which echo the troubles experienced in 1973. A natural gas and oil crisis has been ongoing since the Russian invasion of Ukraine in February 2022 and the economic effects are clearly visible on the market, with acute social consequences looming in the near future. At the same time, the climate change emergency is more urgent than ever: despite decades of warnings from the scientific community, the Western consumerist model has not yet been undermined. Similarly, the Covid-19 pandemic has shown us how fragile our domestic sphere can be, especially when people are forced inside their homes for a long time. Crises are inevitable, and yet, as Silvana Annicchiarico writes, they “can sometimes be healthy” (Finessi & Miglio, 2014, p. 24).

In these times of multiple and worldwide crises, DIY design seems to offer many opportunities to reflect on the discipline. DIY designs are closely intertwined with assembly instructions, combining words and images to further expand the user's agency. Over the years, assembly instructions became a distinctive feature of IKEA, whose global success seems to be grounded on the user's role in assembling the furniture. However, the Swedish company's approach simply integrates the user in the assembly process, allowing no space for unpredictability. Conversely, the 1970s examples of DIY designs discussed in this paper blur the limits between designer and users, and they can be located “in a contradictory intersection between need and desire, creativity and assemblage” (Uribe Del Aguila, 2016, p. 49).

Today, Papanek's lessons seem to be more popular than ever, with recent publications and exhibitions of his work. In 2013, the principles of *Nomadic furniture* were exhibited at the MAK Museum in Vienna, within the exhibition *NOMADIC FURNITURE 3.0. New Liberated Living?* (Fineder et al., 2016). In 2018, the Vitra Museum launched the exhibition *Victor Papanek: The Politics of Design*, the first extensive retrospective on the American designer and author (Kries et al., 2018), followed by the reprint of *Design for the real world* (2019). Mari's *autoprogettazione* is still an explicit source of inspiration for many designers (Almqvist, 2022), and his wood furniture was used in the display of the *Enzo Mari* exhibition,

curated by Hans Ulrich Obrist with Francesca Giacomelli at the Triennale in Milan (2020–21). The recent fascination with 1970s-DIY designs can also be explained by the rise in popularity of Open design projects (Maldini, 2012).

If interpreted within a historical framework, *Nomadic furniture* and *Proposta per un'autoprogettazione* were both linked to the emergence of an ecological consciousness among designers in the early 1970s. Their cheap and sober furniture reflected a growing social and environmental awareness, which becomes exceptionally clear when linked to the austerity prompted by the 1973 oil crisis. Despite being a symbol of an anti-capitalistic vision of industrial design, DIY furniture was not the definitive answer to the social and economic problems experienced throughout the 1970s. However, it indicated a possible escape from the laws of capitalism, towards a shared frugality in the domestic sphere; it was a creative and often ironic response to times of economic and political unpredictability. Unfortunately, design cannot solve complicated geo-political issues. It can, however, help us adapt our lifestyles to new energetic and social needs. Today, early-1970s DIY designs are exceptional sources of inspiration for the uncertainties posed by the increasingly challenging futures that lie ahead.

#### **Sofia Nannini**

Sofia Nannini, Ph.D., is an Assistant Professor in Architectural History at the Politecnico di Torino since September 2023. She has taught at the University of Bologna, Florence, and Pavia, and at the Italian University of Design (2021–23). She is the editor of *in\_bo* and *Architectural Histories* and was a 2023 research fellow at the Canadian Centre for Architecture.

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## References

- Almqvist, E. E. (2022). *Hammer & Nail. Making and Assembling Furniture Designs Inspired by Enzo Mari*. Pavilion.
- Ambasz, E. (Ed.). (1972). *Italy: The New Domestic Landscape. Achievements and problems of Italian design*. Museum of Modern Art.
- Atkinson, P. (2006). Do It Yourself: Democracy and Design. *Journal of Design History*, 19(1), 1-19.
- Atlante Gavina*. (2010). Corraini.
- Barber, D. A. (2016). *A House in the Sun. Modern Architecture and Solar Energy in the Cold War*. Oxford University Press.
- Bonazzi, A. (2023). *E mi chiedeva sempre: Chi è Dino Gavina?* Dissertation, BA in Industrial Design, University of Bologna.
- Borasi, G., & Zardini, M. (2007). *Sorry, Out of Gas: Architecture's Response to the 1973 Oil Crisis*. Corraini.
- Borgonuovo, V., & Franceschini, S. (2018). *Global Tools: Quando l'educazione coinciderà con la vita, 1973-75*. Nero Editions.
- Brigi E. (Ed.) (1992). *Dino Gavina. Collezioni emblematiche del moderno dal 1950 al 1990*. Jaca Book.
- Cacciola, D. (2022). Marcel Breuer, the Wassily Chair and the 'Frozen' Bauhaus Modernism After 1945. *Journal of Design History* (25 February). <https://doi.org/10.1093/jdh/epac001>
- Calder, B. (2021). *Architecture: From Prehistory to Climate Emergency*. Penguin Books.
- Carson, R. (1962). *Silent Spring*. Houghton Mifflin.
- Clarke, A. J. (2021). *Victor Papanek: Designer for the Real World*. The MIT Press.
- Davies, C. (2017). *A New History of Modern Architecture*. Laurence King Publishing.
- Fineder, M., Geisler T., & Hackenschmidt, S. (2016). *Nomadic Furniture 3.0. Neues befreites Wohnen? New Liberated Living?*. Niggli.
- Finessi, B., & Miglio C. (Eds.) (2014). *Il design italiano oltre le crisi: autarchia, austerità, autoproduzione*. Corraini Edizioni.
- Formia, E. (2017). Mediating an Ecological Awareness in Italy: Shared Visions of Sustainability Between the Environmental Movement and Radical Design Cultures (1970-1976). *Journal of Design History*, 30(2), 192-211.
- Friedberg, M. P. (1975). *Do-It-Yourself Playgrounds*. The Architectural Press.
- Ginsborg, P. (1990). *A History of Contemporary Italy. Society and Politics 1943-1988*. Penguin Books.
- Isaac, K. (1974). *How to Build Your Own Living Structures*. Harmony Books.
- Kries, M., Klein, A., & Clarke, A. J. (Eds.) (2018). *Victor Papanek: The Politics of Design*. Vitra Design Museum.
- Judt, T. (2005). *Postwar: A History of Europe Since 1945*. Penguin Random House.
- Maldini, I. (2012). From 'Do it yourself' to 'Open design': Users' Involvement and Democratization. In P.L. Farias, A. Calvera, M. Braga, & Z. Schincariol (Eds.), *Design Frontiers: Territories, Concepts, Technologies* (pp. 419-22). Blucher.
- Maldonado, T. (1992). *La speranza progettuale*. (First published in 1970). Einaudi.
- Mari, E. (1974). *Proposta per un'autoprogettazione*. Grafiche Arsitalia.
- Mari, E. (2002). "Autoprogettazione?". Corraini.
- Obrist, H. U., & Giacomelli, F. (2020). *Enzo Mari*. Electa.
- Orsini, R. (Ed.). (1998). *Dino Gavina: Ultrarazionale, ultramobile*. Compositori.
- Parlato, S., & Salvatore, P. (2019/2020). Riccardo Dalisi al Rione Traiano. Il riscatto sociale attraverso l'esperienza d'animazione. *Ais/Design Journal. Storia e ricerca*, 7(12-13), 159-178.
- Papanek, V. (1971). *Design for the Real World*. Pantheon Books.
- Papanek, V. (2019). *Design for the Real World*. Thames & Hudson.
- Papanek, V., & Hennessey, J. (1973). *Nomadic Furniture Vol. 1*. Pantheon books.
- Papanek, V., & Hennessey, J. (1974). *Nomadic Furniture Vol. 2*. Pantheon books.
- Stamberg Aferiat. Introduction by Paul Goldberger. (1997). Rizzoli.
- Stamberg, P. (1976). *Instant Furniture: Low-Cost, Well-Designed, Easy-To-Assemble Tables, Chairs, Couches, Beds, Desks, and Storage Systems*. Van Nostrand Reinhold Company.
- Stamberg, P. (2019). A Day in the Life of Peter Stamberg. *Architectural Record*. June 5. <https://www.architecturalrecord.com/articles/14071-a-day-in-the-life-of-peter-stamberg>.
- Uribe Del Aguila, V (2016). The Subversive Capacity of Do-It-Yourself Instructions. *Plot(s). Journal of Design Studies*, 3, 36-51. <https://adht.parsons.edu/designstudies/plot/convulsive-beauty-surrealism-and-its-significance-for-design-studies/>.

