

Furniture for our future selves: J39 re-designed

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For our future selves

By 2050, one in six people in the world will be over aged 65 [1]. People are living longer than ever before and this change in demographic landscape suggests that these new older generations might have quite different circumstances and expectations of living conditions compared to previous generations. Elderly people constitute a heterogeneous group of people, and the differences between individuals regarding health and lifestyle increase with age [2]. The act of designing for difference becomes more essential when a marked increase in the proportion of older people in the population is taken into account [3]. This suggests that designers, in the creative process, should involve today's and tomorrow's older people in order to gain a better understanding of – and to speculate future changes in – needs and preferences.

In seeking to advance design as a means by which to improve future living conditions, this paper addresses the challenges in furniture design and presents a framework within which an inclusive chair – not only for an aging population, but for all people – is designed through a creative dialogue between the past and the future. We took a novel approach that combines people-centered methods with the study of the chair's tectonics and typological characteristics as a means by which to improve the quality of chair design and explore the potential of design to improve our possible futures [4]. What we strive for is a chair that can respond to the changing needs and wishes of people as they age.

In the project, we re-design a chair, Børge Mogensen's J39. We developed a prototype that responds to demographic shifts and the changing expectations of tomorrow's older generations. What we present here draws on the previous phase of the project, in which we conducted a workshop with students from the *Furniture and Object* master's program at the Royal Danish Academy – Architecture, Design and Conservation. The point of departure is that there is a lack of furniture that responds to the needs and wishes of older people. The few pieces that do exist are either designed with generalizations made on older people's abilities and preferences, or are unappealing to people at different life stages due to being designed specifically for old age [5, 6]. The challenge, therefore, is to develop knowledge that is more responsive to the reality of older people. However, at the same time, we must contextualize the accumulated knowledge within the evolutionary history of furniture design.

The future in the past and the present

In *Designing Design*, Kenya Hara writes:

“Re-design” refers to a redoing of the design of ordinary objects. You could call it an experiment, an attempt to look at familiar things as if it were our very first encounter with them. Re-design is a means by which to correct and renew our feelings about the essence of design, hidden within the fascinating environment of an object that is so overly familiar to us that we can no longer see it [7].

We selected Børge Mogensen’s J39 – the versatile masterpiece known as the *Folkestolen* [people’s chair] – and started from scrutinising it. This well-known and -used chair originates from the Latin slat back chair, which has a simple construction of sticks placed in holes in wooden legs, held together by a woven seat. The backrest consists of horizontal slats [8]. Danish designers, such as Kaare Klint and later Børge Mogensen, were inspired by this type of chair and combined the characteristic of the Latin slat back chair with the features of a chair type from the North American shaker furniture tradition. The J39 is an outcome of this evolution which advanced the merit of the Latin slat back chair type by thoroughly optimizing its use, material performance, and production processes.

To gain the accumulated knowledge of the past, we measured the chair and registered it in three drawings of plan, front and side elevation views on a scale of one to one. Furthermore, we disassembled the chair in all its parts to develop a detailed understanding of the dimensions and proportions, the inner structure, the assembly technique, the material strength, and the tactile experience of the chair. The visual and haptic understanding of the chair, together with a literature review of the chair type, gave us an opportunity not only to contextualize our challenge within the history of furniture design, but also to create new variations that respond to contemporary concerns regarding use, material choices and fabrication techniques [9].

Concurrent with this journey into the past, we project ourselves into the future – to design for our future selves. At some stage in our lives, certain activities become difficult, especially if one acquires illness, injury or age-related impairments. Regarding the use of chairs, how ought the design respond to such changes? Initially we observed, interviewed, and discussed with older people, using telephone- and video-calls (measures taken due to the risks of Covid-19). The insights gained from these conversations on diverse interactions with the chair, from grabbing, pulling or repositioning the chair, to slouching into it, slumping onto it, or rising from it – were then tested by us ourselves using an age simulation suit. We followed the four stages of the double diamond design process [10], which helped us to select the most appropriate ideas and deliver outputs in the form of a prototype.

When designing, designers look at history, seek formula, and follow convention. Yet, at the same time, designers speculate about the future, question standards, and deviate from norms. Greater influence by contemporary concerns and techniques means that the act of designing itself becomes a challenge to the vetted narratives embedded within the history of design. Likewise, history forces contemporary work to acknowledge its sources of inspiration and to contribute to the broader discourse. We look for probable and plausible futures [11] with great empathy, while inheriting the *formgivning* [form-giving] tradition of Danish furniture design. This dialogue between history and future, and between past and projections, articulates contemporary problems and develops rich narratives leading towards critical yet creative alternatives.

Re-designed J39

We tested and realized our ideas, rejecting those solutions that would not work and improving the ones that would. This process was an intense conversation with, and exploration of, chosen materials and fabrication techniques. This creative practice based on a critical dialogue between the past and the future eventually led us to produce a prototype – the re-designed version of the J39. The re-designed chair shows great respect for the material and form of the original, as it is regarded as a comfortable chair by the older people involved in the design process. However, there are a few recurrent issues that were addressed in the process and these have led us to respond through clear design solutions.

At first, we extended one of the front legs to a height that is easy to grab. The extended front leg is not an ordinary armrest to lean on, but a graspable support to aid in sitting and standing. Sitting down onto a chair and rising from it are difficult movements when one develops age-related decline in muscle function and movement. The extended front leg, which has a rounded top ergonomically suited to grasp, provides a secure handhold while sitting down onto, and rising up from, the chair. Repositioning the chair can also be challenging, especially if one finds it difficult to maintain balance. The loss of strength in the upper body also increases difficulty. Limitations in hand movement can affect the use of the chair – such as grabbing and pulling it. We therefore added a top rail to the backrest of the chair as a second major modification.

The top rail increases the grabbable surface area, providing better grip when pulling or pushing the chair. It also provides an extra support on which to lean when standing up and sitting down. The shape of the top rail is asymmetrical, and, together with the extended front leg, provides comfort in both the visual and tactile experience of the chair. These interventions in the upper part of the chair are complimented with other interventions to the lower part of the chair. We widened the seat for comfortable seating and raised the seat to the height of 450mm, compared to the original height of 435mm. These adjustments make it easier to rise up from and sit down onto the chair. In addition, the bottom of legs were rounded to make the chair slide more easily when one moves back from a table using calf muscles or pulls the chair to reposition it.

We express our respect for the form, dimensions and materiality of the original chair. Accordingly, our design solutions might not appear progressive enough to some or, to the contrary, too radical to others in such a well-known chair. However, we hope that our critical observations uncover the challenges and opportunities that exist in older people's daily lives, and that our creative interventions harness the ordinary and discover – even momentarily – the extraordinary within it. Debate continues over problems that arise from the generalization of human experiences in design processes [12]. And yet, in this project, we have engaged with the history of the chair and addressed the delights and challenges of aging, through which we hope that we have managed to develop a critical alternative and variant of the versatile masterpiece.

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