

edited by  
Maria Antonia Barucco, Elti Cattaruzza, Rosa Chiesa

# ANTIFRAGILE GLASS



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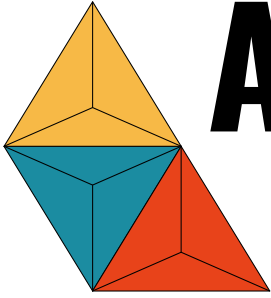
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# **ANTIFRAGILE GLASS**

**MARIA ANTONIA BARUCCO, ELTI CATTARUZZA, ROSA CHIESA**

The year 2022 is the International Year of Glass, established by the United Nations with Resolution 75/279. Università Iuav di Venezia, Università Ca' Foscari Venezia and the Fondazione dei Musei Civici Veneziani are celebrating 2022 with ANTIFRAGILE GLASS: a conference, an exhibition and a publication, but also, and most of all, a celebration of a material, an ancient art form and an industry in constant evolution.

The objective of the UN is to highlight glass technologies and their potential contribution to addressing the challenges of sustainable development and inclusive societies. With this in mind, ANTIFRAGILE GLASS examines the past and future of glass, so that those who work and study this material can continue to ensure that crises are, to all intents and purposes, new starting points for bold innovations.

For many years, Università Iuav di Venezia, Università Ca' Foscari Venezia and the Fondazione dei Musei Civici Veneziani have been involved in training, research and promotion of the history and innovation of glass. The year 2022 was therefore chosen as the ideal time to establish potential partnerships, to structure the dialogue between the region and academia with new guidelines, to challenge young people to imagine the future, to learn from the past and to describe the current state of the art.

The ANTIFRAGILE GLASS programme was designed to promote opportunities for exchange, interaction and discussion. Developed during a period between the initial resumption of collective life and the outbreak of the war in Ukraine, it is therefore a proudly optimistic, broad and challenging programme. ANTIFRAGILE GLASS is an opportunity for discussion, to envision the future of glass, to meet and discuss the need to respond to crises and work on new projects. ANTIFRAGILE GLASS is an opportunity to reaffirm the interest in continuing, renewing or reinventing the aptitude for innovation that craftspeople, manufacturers and researchers share.

Even the title, ANTIFRAGILE GLASS, affirms these objectives. Nassim Nicholas Taleb has proposed using the adjective "antifragile" to describe a new worldview; indeed, this very adjective is the title of his acclaimed book, published in 2012, in which he emphasises the difference between resilience and antifragility. Those who are resilient stand the test of time and retain their structure, their choices and their goals. Those who are antifragile change over time and with time grow, transform, evolve or regress in alternating phases; this renders them consistent with the present day and often innovative. Research, culture, and glass are antifragile. Antifragile is the property of remaining strong during the fluctuations between authority and checks and balances. Antifragile is the ability to develop new ways of thinking and new products in the constantly changing human, economic, and political environment. Antifragile has a stubborn, challenging and revolutionary character. Antifragile is an attitude that becomes stronger in adversity. The city of Venice must also, now more than ever, persist in becoming fully antifragile.

ANTIFRAGILE GLASS enters into a dialogue with this definition and provides evidence that, throughout history, glass has faced challenges, crises, and innovations by transforming technologies, processes, production methods, shapes and designs, while continuing to enhance the characteristics of the material. Glassmakers, innovators, scientists, artists, entrepreneurs and designers have studied and worked with this material; one that has accompanied mankind in the development of new products since the very dawn of civilisation. The material, its design and its technologies are transformed by fulfilling different functions, affirming some of its characteristics and modifying others, adapting to changing contexts and demonstrating a capacity for innovation.

The history of Murano glass is such an example of antifragility. Many crises have affected this art form; they have exhausted and renewed it, put it to the test, overcome and strengthened it. Antique glass more than a thousand years old is very different to the glass that is created in the kilns of Murano today, but between these two manifestations there exists a strong historical and cultural bond. An antifragile, stubborn, and tenacious culture, in as much as it is willing to rise to the challenge of learning the new and from the new. The characteristics that can be observed in a small but highly-valued geographical area – the island of Murano – are also recognisable in academic research, in science, in art-historical and archival research, in design skills, in business culture, and in the skills of the artists and designers who work with glass. It is for this very reason that glass is antifragile.

And to draw the attention of young people to these issues, to invite them to describe their vision for the future of glass and to emphasise the value of shared work, we organised a residential interdisciplinary workshop entitled VETRO FUTURO, which took the form of a hackathon. Strongly endorsed by Università Ca' Foscari Venezia and organised by Università Iuav di Venezia, VETRO FUTURO was included in the programme of The Italian Glass Weeks 2022. This volume of proceedings presents the outcomes in the form of three posters, material produced by twelve master's degree students from the two Venetian universities. What clearly emerges from these papers is the extraordinary ability of these students to reframe the issues we face as starting points for recognising that these problems represent opportunities and new challenges. With this approach, everything can be reevaluated. With muraNEWABLE, the energy supply issue that is affecting Murano becomes an opportunity to rethink energy sources for sustaining a large territory, while poroVE suggests the recycling of waste glass to exploit its chemical and physical characteristics in order to address the complex problems of drinking water pollution and microplastics; finally, wearGLASS proposes the technology transfer of innovations to the fashion industry, which could enable even the most underused waste (such as discarded plate glass from buildings) to be exploited. In this context, Murano and Venice serve as a laboratory of ideas and a hotbed of experimentation, land and culture: ingenuity and willingness to work together are the qualities that the students lend to the universities they attend and to the proposed outreach to local companies. The



editors of this volume aim to seize this momentum in order to work on glass with an increasingly international, collaborative and inclusive outlook.

A call for papers, an exhibition, a workshop and a publication, but, above all, a place for dialogue: all this serves as an important reminder that we cannot be antifragile alone. Antifragility is a quality that can only be developed through a network of connections and bonds that, although in constant flux, recognise the value of antifragility, and support and benefit from it. When one node or connection in the network fails, others make up for this and develop new skills and aptitudes. Every failure, as well as being the actualisation of a crisis, is an impetus for fresh growth. ANTIFRAGILE GLASS is the result of a working method based on collaboration between many people.

For the support given to this work, sincere and grateful thanks are due to the organisations that supported it: Fondazione Luav, Anteferma Edizioni, the OFFICINA\* cultural association and the Regione del Veneto. Without these partners, ANTIFRAGILE GLASS would not be antifragile at all and would lack courage, perseverance and substance. Furthermore, we should not forget the sponsoring bodies, who believed in the value of a wide-ranging and complex project and encouraged its dissemination:

- Italian Committee of IYOG2022 – International Year Of Glass 2022
- CONAI – National Packaging Consortium
- Confindustria Venezia – Metropolitan Area of Venice and Rovigo
- Consorzio Promovetro di Murano
- COREVE – Consorzio Recupero Vetro
- Future Cities Research Hub, School of Architecture and Planning, Waipapa Taumata Rau – University of Auckland
- SITdA – Italian Society of Architectural Technology

The visual identity and, in particular, the logo of ANTIFRAGILE GLASS expresses this variety and diversity in its network of stakeholders: the atoms that make up the tetrahedron structure of silica draw a pattern and constitute the main “ingredients” in the “recipes” of the ordinary glass that is all around us. Silica atoms and three backgrounds, to highlight the three lenses through which we have chosen to investigate glass: science, architecture and design. These are just three among many other potential approaches, questions, perspectives and insights – the first three, and not the only three, points of view that Università Luav di Venezia, Università Ca’ Foscari Venezia and the Fondazione dei Musei Civici Veneziani want to address.

ANTIFRAGILE GLASS is a set of research, teaching and third mission activities that has actively involved teachers and students in a dialogue with the historical, industrial and artistic activity of Venice, the glass capital of yesterday and tomorrow. Both the title and the logo representing the event express the hope that this opportunity for work, discussion and meetings will enable a varied and complex series of activities to be launched to support and enhance the present and possible future of a material that is as innovative as it is ancient.