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Venice: the Issue of Sustainability

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In the first contribution to this new publishing series, I would like to pay homage to the illustrious research precedents, conditions, needs and urgencies that led to the birth of *ARCHiPub. On Cultural and Digital Matters* as part of ARCHiVe[1] at the Fondazione Giorgio Cini.

Between 1955 and 1984, with the collaboration of Sansoni the typographer, the Fondazione published the thirty-eight issues of the *Quaderni di San Giorgio*, which in the form of essays or articles, brought together contributions from some of the most authoritative names on the international cultural scene, who would come to the Island of San Giorgio to take part in conferences and study days, in other words, to participate in what has always been known here as the 'dialogue between cultures'. To this day, in their elegant and sober graphic format of the time, with their graceful typefaces, ivory paper and wide margins for annotations, the *Quaderni* ('Notebooks'), represent a key source of inspiration and knowledge for all those who explore their contents, sometimes attracted by truly unusual and remarkably topical titles.[2] The themes examined – ever

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1   An acronym for *Analysis and Recordings of Cultural Heritage in Venice*, ARCHiVe was created in 2018 from a partnership between the Fondazione Giorgio Cini, Factum Foundation for Digital Technologies in Preservation and the École Polytechnique Fédérale in Lausanne. The centre's headquarters are on the Island of San Giorgio, along with the communication and editorial offices in the same spacious environment. ARCHiVe's activities are largely focused around digitisation workshops, training programmes for the ARCHiVe Online Academy and in dissemination activities of research and projects.

2   For example, *Processo dell'Islam alla civiltà occidentale*, 1957; *Arte e Scienza*, 1959; *Cinema e Libertà*, 1963; *Arte e cultura nella civiltà contemporanea*, 1966; or *L'uomo e il suo ambiente*, 1973.

with a view to interdisciplinary enhancement, with both scientific and humanistic approaches, addressing social, cultural, religious, economic and anthropological themes, ranging from mathematics to the environment, from art to the Gospel – found both a home and food for thought in a fruitful dialectical counterpoint, rarely oriented towards pure historical investigation as much as expressly aimed at the search for the key to interpreting the world of the time. The flap on the back cover of all the *Quaderni* reads, "On San Giorgio we study, and from San Giorgio we speak and write. The *Quaderni* of San Giorgio are thus the written message; the 'Voice' of San Giorgio[3] is instead the spoken message. Hence, the *Quaderni* are not the documentation of the studies carried out on San Giorgio, but rather the documentation of the ideas San Giorgio would like to see spread throughout the world."

And it is on the words 'ideas' and 'spread' that we place the emphasis today too. Ideas that are promoted and documented, the results of experimental research, once again by the most authoritative names of the various disciplines with which we approach our extraordinary and fragile cultural heritage, turning to a future yet to be outlined and regulated, especially in the field of digital humanities and in the honing of innovative professional skills. But at the same time, *ARCHiPub* also aims to give space to the as of yet unpublished studies of young researchers who delve into the relationship between

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tradition and new technologies, capable of maintaining the balance between the 'pure' sciences and the humanities while letting this relationship thrive, allowing us to renew the Fondazione Giorgio Cini's motto: "Tradition is not the worship of ashes but the preservation of the fire," which inspires its everyday work and forms part of the logo borne on all the papers produced here.

Among the pressing issues of the contemporary world, our mission is to find new ways to enhance – and not merely preserve – memory and art-historical heritage, to make it universally accessible, to transform it into a functional ingredient for new cultural and artistic production, and in order to do so, we cannot overlook the tools offered by technology and communications. Anchoring this principle to the research and studies underway today on the Island of San Giorgio, and in particular to ARCHive, those projects characterised by the innovative use of fonds and archives are given space and garner great attention.

An extraordinary example of what can be achieved by coupling memory and technological research, archives (precious repositories of memory) and digital experimentation is *La Maschera del Tempo* ('The Mask of Time')[4]: an audiovisual work created in 2022 by digital artist Mattia Casalegno and digital sound designer Martux_M.

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4   The video is published on YouTube at the link: https://www. youtube.com/watch?v=o6crOPutG1w

Thousands of digitisations coming from historical photographs of the Teatro Verde[5] on the Island of San Giorgio Maggiore – portraying actors, dancers, performers, stage sets and orchestras, processed with special animation software and inserted into environmental digitisations carried out using drones – were merged together into twelve minutes of video. With the help of some of the tools inherent in artificial intelligence and game programming, *La Maschera del Tempo* tells a story set in a post-apocalyptic future where nature has taken over from the human species but where, tireless and ever fertile, theatrical creativity lives on and timeless music plays on.

Venice is a subject of study as an object of research, a solid repository, celebrated over the centuries by the masters of painting, architecture and poetry, a place of live materials and a multifocal research receptacle into the endless sources of cultural production, design thought and a point of international reference. The relentless subject of the work of conservators and archivists, the culture of and about Venice cannot be separated from the rigour of ordering its historical materials.

5   Commissioned by Vittorio Cini and opened in 1954 on the basis of a design by Luigi Vietti, the open-air amphitheatre can seat up to 1,500 people. Defined in the 1950s by actress Katherine Hepburn as "the most beautiful theatre in the world" and included in 2016 among the FAI's Italian National Trust's *Luoghi del Cuore*, the Teatro Verde is so named by virtue of the privet hedges placed on the backs of the stone seats, and is located in the southern portion of the San Giorgio Maggiore Island woodland, blending with the landscape and drawing on the Venice Lagoon as its theatrical backdrop.

Although it may seem paradoxical, reading the title of this contribution of mine, I am not going to talk about Venice, although there are always reasons to do so, nor am I going to investigate the more or less appropriate declinations to which the term 'sustainability' lends itself and which are among the many available to us. Perhaps more space may be devoted to the 'issue' yet without delving into such theoretical nuances, whether scientific or philosophical, that may enrich the interpretation of the word in an abstract sense, especially as it is a topic to which many distinguished authors have already made major contributions. Instead, we shall address the intersection of these three terms to show how – when combined as proposed in the title – they may give rise to a unique, irreproducible, authentic all-round context, and how this may provide the bases for in-depth studies and specialist activities, as well as an ideal framework for other future investigations.

When we use the term 'material' or 'matter', we refer to something tangible, to material 'proof', as if what is made of matter might be truer than what is not. Matter can be touched, raw material is what lies at the origins and carries within its core a sacredness that must be respected. By this word, we often refer to anti-sophistication, to the primary stage, the gateway to what was not there before. In the meaning of its ancestral Greek root, the word matter referred to the wood of the forest. Venice, which seemed an utterly unsuitable place for civilisation, is built on an upside-down forest, from the earliest settlements among

the small, scattered islands of the lagoon around a river delta, to the cathedrals and the large, luxurious aristocratic palaces that still look onto the Grand Canal to this day. Just as then, mater/mother becomes primordial substance, potentially generative, that only form, Aristotle ruled, can make intelligible. And it is from matter that physics extracts theories of structure where its nature and properties become the primary object of research until we come to the principles of conservation of matter-energy.[6] Dark matter, which is the missing matter; grey matter; matter as substance: these are the threshold elements, or rather, the common ground between philosophical and scientific knowledge. In other words, the very scope of *ARCHiPub*'s research.

The matters investigated in this series are tangible ingredients of the artifacts but at the same time 'topics' for reflection; they are physical objects 'stored' through digitisation processes, made intangible in order to be shared, thus becoming topics for further study or achievements in their own right.

Let us now go back to the San Giorgio *Quaderni*. The year 2023 marks the fiftieth anniversary of the publication of the proceedings of the International Course of Fine Culture entitled *L'uomo e il suo ambiente* ('Man and his Environment'), edited by Stefano Rosso Mazzinghi who, in the foreword to the volume, briefly summarises a key

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6   Mention should be made of Gaston Bachelard's indispensable work on matter, elements and the relationship between the potential of science and the skills of poetry that permeate most of his writings.

concept: "Man and Environment are the two concrete terms of a vital relationship that must be resolved in a necessary balance." In the reading we can make of it today, with evident anticipation and scientific depth, these essays announce what has since become one of the pages on which almost the entire world focuses by enacting political proposals, economic antagonisms, nefarious judgments as well as optimistic prognoses for our planet and for what humankind can still do to safeguard what surrounds it. A year ago, the Venice Sustainability Foundation was established, of which the Fondazione Giorgio Cini was among the first founding members and the only private foundation. One of the reasons is because looking at Venice through the lens of sustainability – with a view to making it an intelligible subject for the creation of scalable models – is among the top items on the digitisation of heritage agenda. At ARCHiVe, the goals set for each new activity are to make heritage accessible, to safeguard and facilitate its preservation, and to train new generations in the professions of the future. Therefore, it is not hard to guess what steps a cultural foundation of renowned depth and rich history can take, on the basis of these cornerstones, in order for it to be granted a leading role. In this first issue of *ARCHiPub*, almost all of the contributions gathered have this same and particular characteristic, namely daring to put together terms, research fields and disciplinary approaches that are not only seemingly distant but which, to a gaze more comfortably oriented toward traditional epistemological practices, may even appear oxymoronic.

Some of the contributions to be found in this first issue
of *ARCHiPub* titled 'Venice Materials' – an issue that will
continue to grow over time and which, due to its digital
nature, will continue to welcome new essays and articles as
they become relevant to the theme – I shall anticipate a few
that, albeit from differing points of view, have reflected on
the intersection of the concepts mentioned above.
"'And if Venice Is Sinking': a case study of Material
Pedagogy Using Place and Problem-Based Learning
on a Sustainable Serenissima" in which Bryan
Brazeau (*ARCHiPub* 01/002) addresses the definition
of interdisciplinarity to address the challenges of
sustainability. His contribution focuses on a pedagogic
synthesis between economics, social sciences and
humanities where culture plays a key role. Venice becomes
the case study of a workshop[7] carried out in collaboration
between the Institute for Advanced Teaching and Learning
at Warwick in partnership with the Centro ARCHiVe, and
is developed exploring the theme of the adaptive reuse
of spaces through issues related to knowledge of the
environment, its typical professional declinations and the
preservation of heritage, also in digital terms. Particularly
interesting is the exploration Brazeau undertakes towards
the end of the essay on the writings of Umberto Eco and
Jean Baudrillard, in which he questions the very nature of

7   In early July 2022, as part of the Warwick International Intensive Study
Programme (WIISP), Liberal Arts and the School for Cross-faculty Studies offered an
onsite module in Venice for 16 Warwick students (including students from Liberal Arts
and Global Sustainable Development) and students from select international partners.

Venice as a post-modern cultural construct.

We are so persuaded that there is a certain unanimity in the interpretation of the concept of 'big data' that upon reading Alessandro Codello's essay "Venice Long Data" (*ARCHiPub* X/xxx), a novel perspective opens up even for those who use such terms on a daily basis. The State Archives of Venice, with their eighty kilometres of shelving containing hundreds of years of documentation, is the research pool from which the work started out. The two trajectories along which Codello's innovative essay moves are in fact, on the one hand, the quantitative interpretation of data and their correlation, which allow us to scientifically reconstruct the events and information of the distant past, and on the other hand, the urgent redefinition of historiographic work and practices as we have always understood them. In defining long data, Codello emphasises the duty of us Italians and Europeans, both scientists and humanists, custodians of an unparalleled heritage, to keep track of and preserve this information for future generations. The potential for collecting and reordering the big data of the past into a historical meta-database is manifest at a glance through the reading of the graphs that may be composed, and through the creation of new online and smart databases, we can interrogate archives that until now have remained silent except in the hands of those scholars who have devoted their lives to single research projects. Also in this essay, multi-disciplinarity – here comprising mainly of the digital humanities, economic sciences and complex networks, reorganised in terms of

sophisticated software programming – is the keystone of the project, which is based at ARCHiVe and falls within the framework of an agreement signed in 2023 between Ca' Foscari University in Venice and the Fondazione Giorgio Cini. But our goal is not simply to study and preserve heritage for future generations. The real purpose of this research and the application of these systems is the delivery of a better, richer, more intelligible, more orderly and better-maintained heritage, and potentially one that is even more beautiful.

In his essay "On Science and Beauty", Guido Caldarelli (*ARCHiPub* 01/001) exploits what might conceptually seem to be yet another ancient oxymoron: he relates a field that is objective, verifiable in nature, to one that is instead anchored very much to the subjective sphere and personal interpretation. But there is more common ground than one might think at first glance: art, starting with the graphic ability to translate scientific research into imagery, including moving images, is the result not only of reading the quantitative data gathered but also of the imagination and the persuasive capacity that science is required to employ in order to present its achievements. The process is also valid the other way around. That is, if an artist's creativity is based on formulas and quantitative data, the resulting aesthetic experience often surpasses the more 'impressionistic' experience of observing a work made exclusively from 'stirrings of the spirit'. One of the greatest representatives of this field of work is certainly Lazslo Barabasi. The famous statement "if a mathematical formula

is beautiful, then it is also correct" means exactly that. Through a major historical excursus, Caldarelli investigates the occurrences in which science has been the object of aesthetic inquiry (and vice versa) by drawing on two guiding assumptions: symmetry and simplicity.[8] As co-author of the Venice Long Data project together with Alessandro Codello, in his contribution, Caldarelli also investigates the potential of long data for the purposes of documenting, among other things, how aesthetically readable the images and 'works' arising from the processing of such a large amount of historical data can be.

Thus, thirty-seven years after the last *Quaderno di San Giorgio*, a cross-sectional series at the Fondazione Giorgio Cini returns. Over this time, the institutes, centres and scholars of the Foundation have unceasingly produced countless, fundamental volumes so as to leave traces of their work, with collections and research projects that have promoted the most important of models throughout the world: the desire for confrontation and the scope for collaboration between different cultures. Today, as we have seen by glancing through the individual contributions, *ARCHiPub* responds to an urgent demand: satisfying the need for interdisciplinarity that touches on all areas of culture and that addresses a future, one already present, in which new technologies become a universal language. Every

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8   Simplicity in the sense in which Constantin Brancusi understood it i.e. as a resolved complexity, a concept quite unlike the meaning of 'easy'. *Author's note*.

day at the Fondazione Giorgio Cini, research that goes beyond disciplinary boundaries and that tttttneeds to be shared is undertaken and celebrated.

Reason and poetry, experimentation and theory, overcoming outdated conceptual approaches and making use of the human propensity to adopt artificial and technological tools will together enable us to learn about reality in its many beautiful manifestations.

Island of San Giorgio Maggiore by Alessandra Chemollo

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Analysis and Recording
of Cultural Heritage in Venice

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ARCHiPub. On Cultural and Digital Matters is an interdisciplinary book series that gathers research on topics such as archival studies, digitisation projects, and cultural heritage conservation. Each volume focuses on a research theme, to be explored by authors from different academic backgrounds.

This contribution is part of the focus research *Venice Material*. Venice Material is the starting point. Venice as a city, as an environment in which history has formed the present civilization and as a fertile humus of ever-new cultural sap. Venice as a bridge between worlds that were sometimes created, sometimes destroyed and still a bridge between ways of producing culture as a primary good. Venice is made out of matter, stone, painting, poetry, a rich and sensitive work, layered materially and immaterially like no other city in the world. Venice as a launching pad for new experimental horizons, as a landing place for new generations of scientists and creative people. But Venice is also considered as a subject of study, a focus of scientific and humanistic research, endowed with the persuasive force of authentic insights that seem to multiply rather than run out. Venice as an object to be investigated, disassembled and reconstructed, digitized and disseminated, curated.