

Marche in Tavola. Augmented Board Game for Enogastronomic Promotion

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Abstract

This paper aims to illustrate the first experiments deriving from a research project which intends to verify the potential of augmented reality technologies in the field of the valorization of food and wine heritage. In particular, a playful interactive editorial product was prototyped. It was made up of table board and picture cards to be consulted through an augmented reality application based on a web platform. The augmented contents were developed with the intention of showing a possible food pyramid built on the knowledge of the qualities of the typical foods of the Marche region.

Keywords

food and wine, territories, experiences, board game, augmented reality.



Food as Cultural Heritage

Food and wine heritage represents a fundamental driver that not only enriches tourist offer but also stimulates the economic, social and cultural development of a territory. For this reason, gastronomic tourism requires new strategic, economic and promotional models that encompass different but deeply interrelated areas [Garibaldi 2017].

It is no longer limited exclusively to the purchase of local products or the eating of typical dishes, but the activities also expand to participation in dedicated events or visits to farms, wineries, dairies, etc. A plurality of experiences in which the involvement of senses is qualifying, through which enjoying the cultural heritage of the place in an active and involving way, enriching the value of sharing. Food and wine therefore become a means for the recovery of collective memory and for the characterization of identity.

According to the *Rapporto Sull'innovazione Tecnologica nel Turismo Enogastronomico* [Garibaldi 2020], 62% of Italian tourists would use an application or a website which would lead to the discovery of the typical food and wine of the place, and 52% would like to visit production places which use multimedia technologies to enrich the visiting experience. The author of the Report reiterates that the use of technologically advanced tools and systems such as VR, AR, holograms or multimedia tables facilitate the relationship with the tourist, before, during and after the experience, stimulating a more immersive, engaging and personalized tourist experience.

The research project Food and Wine Heritage in the Marche Region: Digital Storytelling Through Virtual and Augmented Reality [1], conducted by a multidisciplinary team composed of designers, architects, nutrition biologists and computer scientists from the University of Camerino, has set itself the goal of enhancing the Marche region through the use of digital tools and systems that exploit the potential of virtual and augmented reality. The project focuses on new narrative modes, in order to provide insights into the culture of food, and to tell and spread the variety of typical products of the Marche and the territories to which they are linked.

The reconstructions of the historical events of Marche's cuisine and its food traditions reveal interesting relationships between popular and aristocratic, lay and conventual culture, but also between oral tradition and written codifications [Bellesi, Franca & Lucchetti 2010]. These researches gather a vast documentation that testifies how the territory of Marche already between the IX and III centuries B.C. at the time of the Piceni and then in the Roman age, was known for its cultivations and agricultural products, among which wheat, fruits, wine and olives. A great part of this heritage has been handed down through local traditions and in the diffused organic productions, today known in the world for the excellence in wine production or for the primates in the oil and beekeeping fields and for the high quality of restaurants.

However, enogastronomy in Marche represents not only an economic vector, but also an important socio-cultural factor, intimately connected to a complex set of material goods, made of architectural, artistic, environmental and landscape heritage, and immaterial goods represented by culture, identity of places, ways of living and traditions, as well as human resources and entrepreneurial skills [Simonelli & Zurlo 2004].

Research Objectives

The project, therefore, is based on the conviction that through visual design and the use of AR and VR digital technologies, it is possible to achieve the definition of innovative forms of storytelling capable of enhancing the local food and wine heritage and contributing, at the same time, to the revitalization of the cultural richness of the stories, traditions, know-how, beauty, widespread quality and the "genius loci" of the Marche region. In this sense, design constitutes the strategic lever through which to preserve the social and economic-productive characteristics of the territory, in order to avoid creating "synthetic" visit experiences, which can generally transform places into mere tourist attractions.

For these reasons, the research aims in particular to provide technologically innovative tools based on mixed reality systems and technically advanced devices and applications, able to spread the food and wine culture of the Marche region, telling stories and peculiarities of typical products, raw materials and food industry, and how these are combined with the territorial heritage and landscape. In addition, the technological models that are intended to be developed through VR and AR technologies are intended to promote interest in food and environmental education, enhancing not only local products but also the places of origin and production chains typical of the food and wine of the Marche. Basically it is foreseen the elaboration of a precise narrative strategy based on experiential activities, through the exploration of local itineraries and the discovery of quality food and wine products (when, where and how they are produced and consumed) [2]. In this scenario, in order to guarantee an organic and transversal development of the research project, a working group has been constituted. It includes and interconnects different disciplinary fields. In fact, designers and experts in digital representation were joined by biologists, nutritionists, scholars of the Marche region's diet and computer scientists. In other words, the components together constitute a framework of integrated and complementary competencies, extending from visual design to art history, from videography to landscape surveys, to computer graphics, 3D digital modeling, visual communication, interactive applications, database management, etc.

AR Board Game

Among the activities, those that explore the potential of AR refer to a system composed of a board game to be consulted through the use of an augmented reality application, to be used by smartphone or tablet, able to illustrate in an interactive way a possible "Marche" food pyramid, which aims to promote the knowledge of the qualities of the typical foods of the region.

The board game offers the possibility to know the peculiarities of some local typicalities, through augmented contents, using a series of support cards that, as in an illustrated atlas, accurately describe the products both from a nutritional and a historical-cultural point of view. In essence, it is a system composed of tablet boards and cards to be consulted through the use of smartphones or tablets and an augmented reality app.

This system makes use of a visual lexicon consisting of illustrations that faithfully reproduce ingredients and dishes, more or less known, of the local food and wine, made through a graphic synthesis that privileges a zenithal vision to allow the visualization of the food product in its entirety, and a chromatic system consisting of a palette of homogeneous colors that refers to the original ones. These representations are placed in a graphic field composed of a circular disc, which is meant to suggest the shape of the dish (fig. 1).



Fig. 1. Graphic elaborations related to the maps of food and recipes of the Marche region (elaboration by Livia Barone).

While for the game board representing the geographical profile of the Marche region, neutral chromatic tones were used to obtain evident contrasts with the cards (fig. 2). The interactions are based on simple dynamics: the cards representing the single typicality, once positioned on the board and framed with your device, will allow the visualization of an animated infographic, which will return information related to the position that the food occupies in the food pyramid, a histogram that illustrates the nutritional values and the territory of origin located within the geographical profile of the Marche region, present in the game board. To complete the experience, a series of special cards dedicated to some typical recipes illustrate in the same way how to 'correct' their position on the pyramid, and consequently the frequency of use, modifying dosages or types of cooking.

The augmented content is composed of the illustrations on the cards and on the boards represented in 2.5 D mode, that is, they are two-dimensional graphics arranged in a three-dimensional space. The platform used is that of Artivive [3] and when the smartphone or tablet will frame the card positioned in the appropriate stall on the board, the cards, depicting the individual typicality, will allow the display of an animated infographic (fig. 3).



Fig. 2. Marche in Tavola, table board.



Fig. 3. Augmented information activated by the use of Artivive app

Conclusions

Digital mediation techniques, 3D models, 360 panoramas, dynamic interfaces, redefined spaces and times of learning. Indeed, it is indisputable that today the 'new' media are the protagonists of a 'shift' towards renewed communication models that aim to an extension of the cultural offer in an increasingly rapid and immediate form. The communicative actions and the new forms of representation aim to facilitate understanding, to clarify aspects of complexity, to present concepts in a clearer and more concise manner; to make the information more explicit and useful, while at the same time ensuring a high level of scientific content.

In this framework, the research project explores the potentialities that can emerge from the integration of traditional communication systems made up of paper and editorial artifacts with technologically advanced tools based on mixed reality systems for the valorization of the excellences of the Marche region's food and wine sector. Therefore, the board game project can become useful to understand, on one hand, the levels of interaction between paper and digital artifacts, and on the other hand, to establish the "balance lines of interaction", in order to maximize the general aims of the prototype. In fact, this integration between traditional and digital modes of communication must first of all stimulate the user to delve into topics both of a scientific nature, such as nutritional ones, as well as historical and cultural ones, which are combined with the territory.

Notes

[1] Project funded under the call established by the University of Camerino for the allocation of the 2018 University Fund (FAR). Duration: 24 months (1/2/2019 - 1/2/ 2021).

[2] Among the products analyzed: olive all'ascolana, mela rosa dei Sibillini, miele dei monti azzurri, formaggi di Fossa, salame di Fabriano, pecora sopravvissana, ciuascolo dell'alta marca, crescita fogliata di Fiuminata, torrone di Camerino, salame di fichi marchigiano, verdicchio di Matelica, Vernaccia di Serrapetrona, vino cotto di Loro Piceno, pesca della Valdaso, vincisgrassi, carciofo di Monte Lupone.

[3] The website claims that: "Artive is the Augmented Reality Platform for Art. This new technology allows artists to create new dimensions of art by linking classical with digital art. The digital layer opens the doors to a whole new world of possibilities". Artive system is composed by two parts: Artive App for the visualization and the Creational Tool where everybody can create digital layer to overlap to the reality. <https://artive.com> (20 february 2021).

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