

MAD Memory Augmented Device: a Virtual Museum of Madness

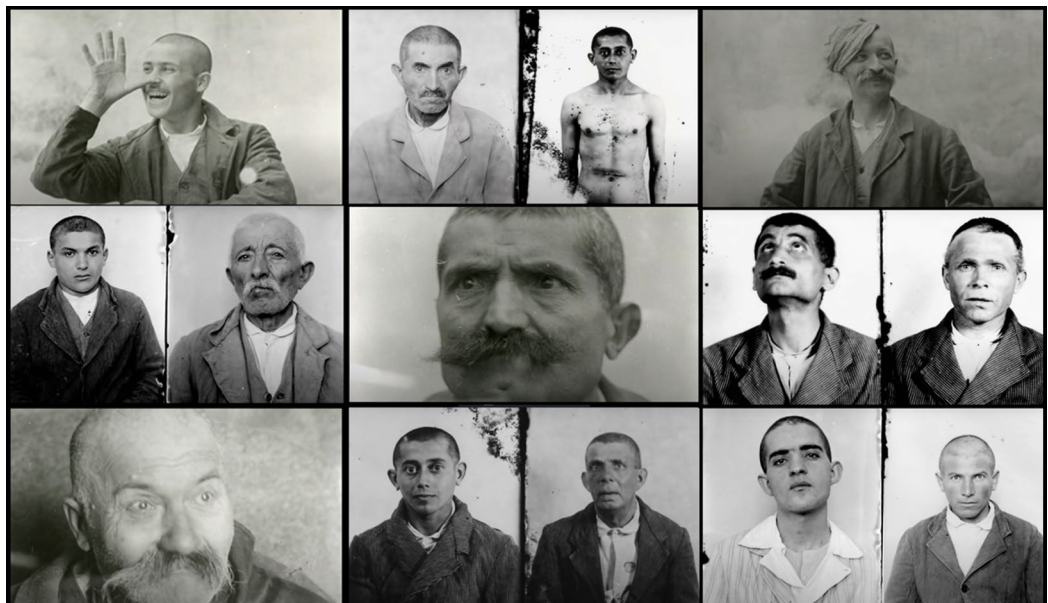
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Abstract

This contribution focuses on the topics of identity and memory and how Augmented Reality and Artificial Intelligence are a useful tool for the enhancement of some areas of study still not fully accepted from the cultural point of view. In particular, the objective of the study is the rediscovery of asylum complexes. These, before being conceived as places of therapy, were conceived as places of confinement and control of a social 'problem', for a long time managed within the walls in which the mentally ill were isolated. Through the application to a specific case in which Augmented Reality and Artificial Intelligence act in synergy, the contribution presents a research path aimed at restoring value to the identities of individual patients, hidden and denied first by necessity and then by the will of obliteration.

Keywords

identity, memory, psychiatric hospitals, asylum tourism, digital avatar.



Introduction

After the closure of psychiatric hospitals, established in Italy by the so-called Basaglia Law (Law 180 of May 13, 1978), these complexes underwent a phase of progressive abandonment. This was followed by a reawakening of interest that led not only to the rediscovery of these places, but also to their re-functionalization, both in continuity with their original function (for example, reusing them as mental health centres or public health services) and in a freer way, but still aimed at enhancing their vocation and memory (for example, turning them into museums for the public). These interventions allowed “to address the psychiatric issue from a new point of view by emphasizing and integrating ex post facto the drive for openness and visibility of the psychiatric world already advocated by Franco Basaglia.” [Guglielmi 2020, p. 178]. This has highlighted the architectural heritage of disused psychiatric hospitals, which have become an important element in the construction of collective identity, becoming part of the so-called ‘asylum tourism’, now widely spread not only in Italy. The many experiences of reuse, recovery, redevelopment and return to public use of these complexes are configured as actions of redemption compared to the inaccessibility that had marked them in the past and open to a renewed interpretation of asylum places as vehicles and living testimonies of memory and identity. It is precisely on the themes of identity and memory and the need for their enhancement that further reflection is necessary. Not only for the consolidation of a change in approach but also for the potential offered by the technologies of Augmented Reality and Artificial Intelligence that, for their ability to allow applications capable of proposing and communicating innovative content in an immediate and immersive way, can be usefully employed in the processes of enhancement of specific areas of study and not yet fully accepted by the cultural perspective.

From Asylum to Cultural Function

In the last twenty years there have been many studies and researches aimed at investigating the history of Italian asylum complexes in order to describe their role, to rediscover their activity and to define their value, both from a historical and architectural point of view and from a social and cultural one. The first exhaustive mapping of public asylums, including some significant private institutions in the hospital scene, was promoted in the nineties by the Benetton Foundation Research Centre and published with a title illustrative of its nature: *Per un atlante degli ospedali psichiatrici pubblici in Italia* [Fondazione Benetton studi e ricerche 1999]. This first cataloguing experience led to two important activities: the project *Carte da legare. Archivi della psichiatria in Italia*, a census of Italian psychiatric archives, whose results are collected in the portal of the same name that allows access, with the appropriate authorization levels, to the archival records of mental hospitals [www.cartedalegare.san.beniculturali.it]; the PRIN 2008 project *Spazi della follia*, articulated in five local units (University of Camerino, Seconda Università di Napoli, University of Palermo, Politecnico di Milano, Politecnico di Torino), dedicated to the knowledge and enhancement of the historical-architectural heritage of former asylum complexes. The results of this second project have been published online in the portal *Spazi della follia* [spazidellafollia.unicam.it] and then in the volume *I complessi manicomiali in Italia tra Otto e Novecento* [Ajroldi et al., 2013]. The use of the tools offered by new technologies has been an essential step for the enhancement of the results of such research, allowing to disclose the results to a wide audience, made up not only by scholars, but also by a community increasingly involved in learning content of considerable identity value [Guglielmi 2020, pp. 177-204]. In particular, in the recent period, some experiences aimed at deepening and spreading the knowledge of asylum structures through a variety of digital tools appear emblematic: in addition to the already mentioned freely consultable websites, there are also multimedia supports used in the setting up of physical places used as museums, often located in the same asylum structures. It seems important to underline how these experiences represent some of the fruits of the path strongly supported by the psychiatrist Franco Basaglia in the 1970s, aimed at opening up and making visible the asylum structures,

or rather, at promoting interaction between psychiatric patients and the inhabitants of the cities that housed the asylum structures themselves. [Foot 2014]. In this sense, his experience at the San Giovanni psychiatric hospital in Trieste is exemplary, where he implemented a revolutionary conception of life inside the asylum. Having become director of the hospital in 1971, Basaglia transformed the ward of the 'calm' into a laboratory, where the patients, both men and women, could work together with invited artists. Among them is his cousin Vittorio Basaglia, a sculptor and pupil of Marino Marini. Together with Vittorio, the patients created the *Marco Cavallo*, a large sculpture of wood and papier-mâché 4 meters high. On 25 March 1973, the sculpture leaves the hospital and enters the city of Trieste, followed by over 400 patients. Its belly was filled with tickets on which were written the dreams of the 1200 patients hosted in the structure. The event has a strong resonance so as to attract the attention of intellectuals of the time. Among these, Umberto Eco who describes the *Marco Cavallo* as "a giant, evoker of myths, memories, collective fantasies". [Tobagi 2018]. After five years, that "collective fantasy" begins to have concrete possibilities of realization. In 1978, with the approval of the Basaglia Law, asylums were gradually abandoned. From places referring to an imaginary of imprisonment and drama, isolated from the life of the city, these places became part of the city circuits, welcoming new recreational, educational functions or the enhancement of the memory of those places and the people who lived there. For example, the green spaces of asylum facilities, previously enclosed within gates, are converted into public parks or gardens made available to the community: such as the park of the former psychiatric hospital of San Giovanni in Trieste, now a public place known as *Parco di San Giovanni* [parcodisangiovanni.it] and the park of the former provincial psychiatric hospital of Gorizia, now a laboratory of social entrepreneurship of welfare and creative activities known as *Parco Basaglia* [itineraribasagliani.org]. Or again, the interior spaces of asylum structures host educational functions, often linked to the world of literature and art: such as the former psychiatric hospital of Maggiano in Lucca, today seat of the *Fondazione Mario Tobino* [fondazionemariotobino.it] or the former *Ospedale Psichiatrico Paolo Pini* in Milan, today seat of the *Museo d'Arte Paolo Pini* [mapp-arca.it]. Finally, asylum facilities are transformed into museum spaces for the preservation and narration of the memory of those places, making accessible to the community both the intangible heritage (consisting of the testimony of doctors, relatives and patients) and the material heritage (consisting of objects owned by patients, medical records or protocols adopted for treatment). Just think of the case of the former *Manicomio di San Servolo* in Venice [servizimetropolitani.ve.it/museomanicomio] or the former *Manicomio di Volterra* [manicomiodivolterra.it], which are representative of similar experiences in Italy.

AI and AR for a Renewed Use of Asylum Complexes

The educational, cultural and social role characterizes museum spaces by definition. From this point of view, the use of advanced technologies, with particular reference to interactive and immersive tools through the use of AI and AR, favors the possibility of dissemination to a wide audience. All the more so when the memory to be transmitted concerns dramatic places or events whose deep understanding involves dynamics of empathy and identification. Thus, on an international level, the *Memory Lane* museum complex in Kubinka, Russia, is dedicated to the narration of the dramatic events linked to the Second World War through a series of installations that extend for over a kilometer, evoking scenes of war in which the visitor is directly involved through interactive experiences [1418museum.com]. Still, at the national level, the *Gallerie di Piedicastello* in Trento consist of two disused road tunnels converted into laboratory and exhibition spaces, respectively characterized by white and black interiors, intended to convey knowledge about the events of the war in Trentino: the white tunnel through educational activities and the black tunnel through performance installations aimed at directly involving the visitor in those events. [museostorico.it]. With specific reference to the theme of mental hospitals, there are two main types of action. On the one hand, museum experiences in which the transmission of knowledge about mental illness and

Fig. 1. Museo della Follia, 2011 (left) and Museo Laboratorio della Mente, 2000 (right), the multimedia exhibition.



asylums takes place mostly by offering visitors a collection of material goods or oral sources from former patients or medical staff (as in the case of the *Bethlem Museum of the Mind* in Beckenham [museumofthemind.org.uk], England, or the *Oregon State Hospital Museum of Mental Health* in Salem [oshmuseum.org], USA). On the other hand, there are also projects based on a real narrative structure through an oscillation between objects and life stories. All this with the intention of offering the visitor the tools for critical knowledge and to activate real 'educational processes'. Just think about two exemplary experiences belonging to the Italian context. On the one hand, the *Museo della Follia*, the evocative traveling exhibition developed by Vittorio Sgarbi since 2011, in which the visitor crosses dark spaces, intentionally disorienting and disturbing: through paintings, photographs, sculptures, objects and multimedia installations with the theme of "Madness" (varying in relation to the city that temporarily hosts the exhibition), the visitor is introduced into a path of knowledge that passes through the identification with the other [museodellafollia.it]. From the other, the *Museo Laboratorio della Mente*, realized in 2008 by the synergy between ASL Roma and Studio Azzurro: inside the pavilion VI of the former asylum of *Santa Maria della Pietà* in Rome there is an immersive and multimedia exhibition that stimulates the active participation of the public, in a continuous fluctuation between real and virtual elements [museodellamente.it] (Fig. 1). At the same time, there are initiatives aimed at connecting ongoing research and projects addressed to the memory of asylums (conducted both at regional and national level) also by proposing completely virtual visits. This is the case of *Mente in rete*, a network born in Italy but with the prospect of expansion at the international level, aimed at safeguarding, preserving and enhancing the memory of psychiatry and promoting mental health through virtual itineraries [menteinrete.it], as well as *Risme*, a project dedicated to the creation of a virtual museum of studies on the mind and mental health in Bologna and Emilia-Romagna in the nineteenth and twentieth centuries [risme.cittametropolitana.bo.it].

MAD Memory Augmented Device

The case study analyzed, which in the context of the present research takes on a pilot value, is the former neuropsychiatric hospital of *Santa Margherita* in Perugia. The following is a summary of its main events. [Agostini 1924; Rotondi, Nocentini 1993; Rotondi 1995; Corinaldesi 2010; Salvo 2010; Salvo, Di Lorenzo 2013; Rosi Cappellani 2014-2015]. The area in which the complex rises is located on the edge of the city, on the east side of the historical center, in the area of the park of *Santa Margherita*, and is characterized by an articulated orography and by a rich naturalistic landscape, revealing from the origin its aptitude to host architectures of isolation, distributed on multiple heights and characterized by wide open spaces. The asylum is placed there in 1825, absorbing functions of assistance of psychiatric patients already active in other locations of the city of Perugia since 1699, and there will remain until its suppression. At first inserted in a pre-existing convent building, the asylum expanded over the years with the construction of new buildings designed by excellent authors. Luigi Poletti, assisted by his pupil Francesco Cellini, and later Giulio Maria De Angelis, configured over

time what would later be called the *cittadella dei pazzi* for its “village-like” articulation, in line with French theories for the treatment of psychiatric disorders not limited to segregation but oriented to care through a wide range of open spaces (Fig. 2). At the end of the nineteenth century, the complex, consisting of eight buildings spread throughout the area and dedicated to the hospitalization of different categories of patients, is organized into two distinct nuclei. The main one in the area of *Santa Margherita*, for a male section, and the second one close to the district of Monteluçe, for a female section. The two nuclei were communicating by means of a flat avenue in the green and equipped with a track for transport. The subsequent developments of the *cittadella* are aimed at a functional reorganization: some buildings are demolished and replaced by new and more functional pavilions; further small extensions follow until the end of the thirties of the twentieth century and provide the complex with services for patients (theater, library, bar and store). After World War II, a national design competition for the construction of the new Provincial Neuropsychiatric Hospital of Perugia was held. The winner is the Venetian architect Daniele Calabi. This project and a next project of enlargement by the Perugian architects Francesco and Pietro Zannetti will never have followed. In 1965, the renewal of the Provincial Administration presided over by Ilvano Rasimelli started a process of deep change in the conception of psychiatric assistance, which involved a renewed vision of the patient and his care: the hospital gradually opened its doors, putting the rights and dignity of the person at the centre. Thus, in 1978, with the approval of the Law Basaglia, the asylum of Perugia is already prepared to the dismantling. This reaches to fulfillment in 1980, while to national level the closing will be completed only to half of the years Ninety.

Thus, research was conducted on the archival documentation of the asylum preserved at the *Archivio di Stato di Perugia* (ASP), with particular attention to the analysis of the original medical records (filed from 1824 to 1981), with the aim of enhancing the memory of the former provincial neuropsychiatric hospital of *Santa Margherita* in Perugia and to give voice to the silent identities of the former patients (Fig. 3). The investigation revealed the subdivision of the conspicuous documentation on the basis of the departments that constituted the hospital itself at the time: in addition to the documents concerning the psychiatric patients of the *Santa Margherita* hospital, there are also those relating to the inpatients at *Villa Massari*, the *Regia clinica delle malattie nervose e mentali dell'Università di Perugia* and the *Reparto libero*. The individual patient file is divided into three main parts: the administrative documentation, that is the correspondence between the Direction of the Neuropsychiatric Hospital, the Mayor of the City and the President of the Court of Perugia; the medical-health documentation, which in turn consists of the questionnaire for admission to the hospital (aimed at reconstructing the patient's clinical-family history by means of ritual questions), the actual medical record, and the certificate of identity (in which the patient's personal data and a photographic image were reported), the nosological register (in which, in addition to the description of symptoms, the final outcome of the hospitalization for discharge or death

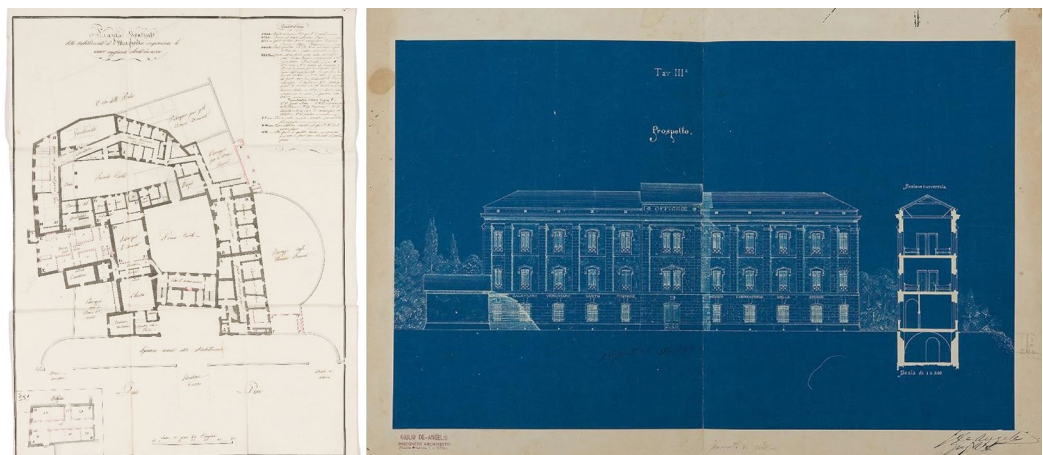


Fig. 2. Poletti L., *Adaptation of the Hospital of Santa Margherita in Perugia*, General plan of the Santa Margherita hospital, Civic Art Library of Modena, 1832 (left); De Angelis G., *Project for the pavilion for sick workers* (later called the *Adriani pavilion*), 1884-86, frontal view, Archivio di Stato di Perugia (right).

of the patient was transcribed), the clinical diary (in which the developments of his mental condition were recorded), medical certificates and any diagnostic tests; Finally, the private documentation, consisting of the patient's correspondence with family members. In detail, the symbolic document of the "medicalization of madness" [Foucault 1998, p. 58], was definitely the medical record. The records found, filed in two subseries (men and women), were ordered chronologically with respect to the date of admission and represented dossiers in which all the information related to the hospital stay was reported by the neuropsychiatric hospital itself: the patient's personal details, the patient's serial number (a unique element of identification of the patient within each department and assigned at the time of admission), the medical history and the diagnosis of the treating doctor. The project is based on the results of the analysis of this documentation in order to create an integrated museum where AI and AR interact synergistically. A physical museum, whose installation is proposed inside a disused gallery located in the immediate vicinity of the area of *Santa Margherita* in Perugia, the original site of the asylum complex, contributing to enhance through an immersive installation an urban space otherwise forgotten because now unused. But also, a virtual museum, which finds space in social networks through an *Instagram* profile in which a multitude of digital avatars are the actors of the narration of individual personal stories. These virtual constructs 'impersonate' within the *MAD* museum the testimony of the alienated, reconstructed from the analysis of medical records. In particular, the virtual graphic transposition of the 'patient-type' was possible thanks to *Reallusion's Character Creator* software, which allows the interactive design of realistic three-dimensional characters by determining their posture and facial expression, as well as allowing them to be equipped with clothing and accessories. In the specific case study, the physiognomy of the patient Natale Barbafigna (1922-1973) was virtually reproduced. His physiognomic features were derived from a photo attached to his medical record and reconstructed using the *Headshot* plug-in for *Character Creator*. Based on AI, the plug-in is able to generate in real time the somatic features for digital avatars starting from a single photograph of the person. Once the basic human structure is recreated, the program lets users modify and refine the virtual character's facial features and traits using the *Sculpt Morph* command. Specifically, by keeping the source image as a transparent background, it was possible to 'sculpt' the 3D model of the avatar in a more accurate way, so as to increase the correspondence with the real photo of the patient. Through sculpting operations on the control areas of interest, three types of parameters were then set; parameters that define the general configuration of the head such as height and width (*global morphs*), parameters that shape the contour of the face by acting on the front and side lines (*peripheral morphs*) and parameters that trace the details of the face from the eyes to the mouth (*feature morphs*). Subsequently, through the *Edit facial* function, the character was given a unique and distinctive facial expression, customized from the predefined ones and able to evoke the attitude of the subject. Finally, *Reallusion's iClone* program was used to animate the avatar's face. Specifically, through the *Acculips* feature, it was possible to perform lip synchronization and translate each phoneme into a viseme. So, the stories of the alienated, who remained within the walls of the asylum, are narrated by virtual patients, electing the *MAD* integrated museum as a choral tale of a forgotten past (Figs. 4-5).

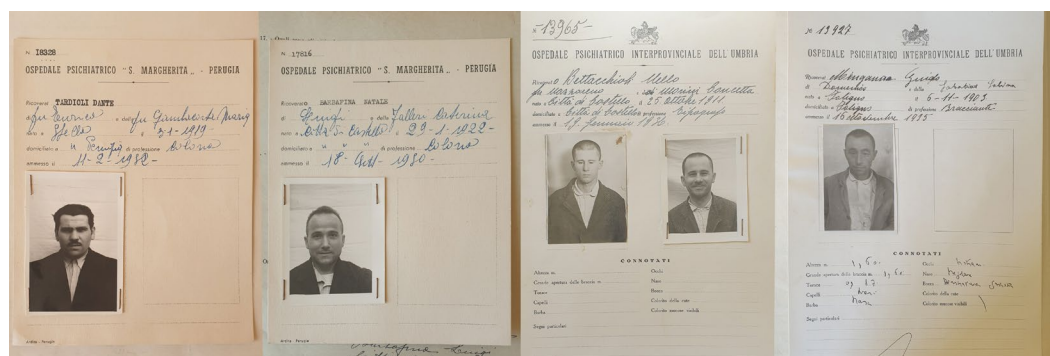


Fig. 3. Original medical records (filed from 1824 to 1981), Archivio di Stato di Perugia (ASP).

Conclusions

As in the case of all Italian asylums, the history of the former Psychiatric Hospital of Perugia is also made up of denied identities. The asylum is a 'microcosm' which, although inspired by an ideal model of society, declares itself with an impassable perimeter of walls and protective nets. The apparent spontaneity of the images of daily life inside the *cittadella dei pazzi* is the filter imposed by an altered normality, in which every action is subject to precise rules of behavior on which the will of the individual patient cannot influence. The faces and stories of the many psychiatric patients (whose declared pathological condition often derives from a less than perfect adherence to the conventionally defined roles of social behaviour) are closed in the archives and wait to be rediscovered. Through this interpretation, reflecting today on the theme of identity takes on an even more significant value. Man lives in a society oriented towards a potential drift algorithmic that seems to deny the value of individual identity. Just think of the portal *thispersondoesnotexist.com*, which exhibits the performance of AI by generating perfectly plausible faces of non-existent people, and consider its social implications as a result. Recovering the meaning of each individual's identity right through AI becomes a search for authenticity that gives depth of meaning to these tools. Even more so when identity is linked to memory and when the memory to be rediscovered and consolidated is composed of individual identities that have been forgotten because they have been denied. The MAD project ascribes to AI the role of memory fly-wheel: no longer a random generator of identities that do not find a real correspondent (in this sense poor in value) but an actor in the valorization of real identities obliterated by history. Through the project, the identities of places and people are remembered and collected in an experiential museum in which the uniqueness of personal experience contributes to the construction of a collective identity in which to recognize and through which to grow new shared meanings.

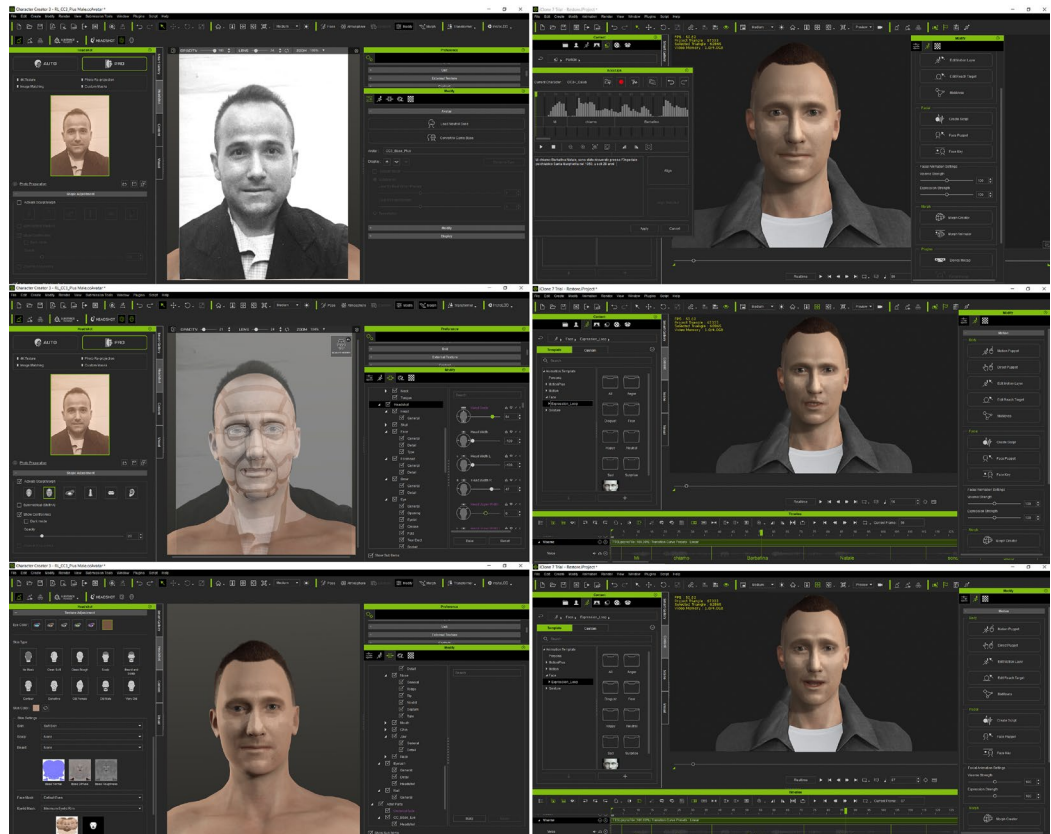


Fig. 4. Digital patient modeling (left) and animation (right) through Reallusions's Character Creator and iClone software.

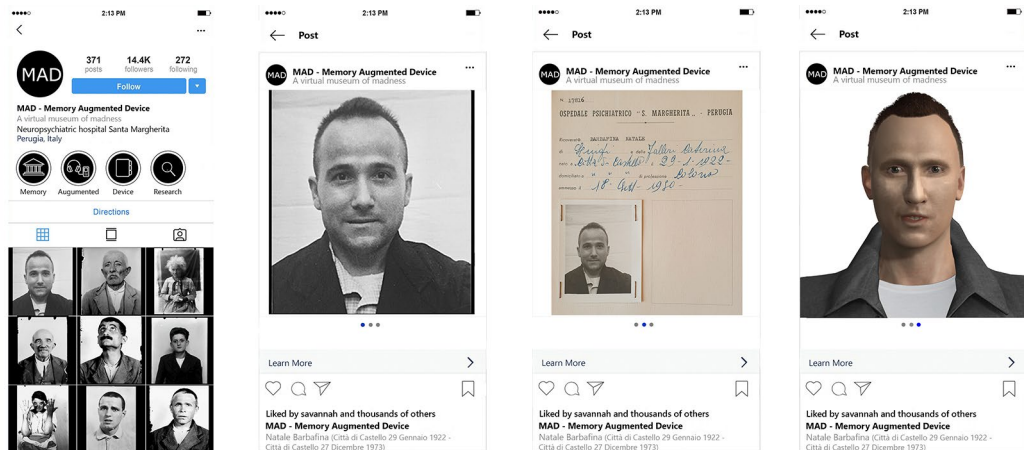


Fig. 5. Instagram profile of the MAD project with patient photos, medical records and digital avatar.

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