Reminiscience: creation of art using memories and emotions. Using artificial intelligence for the practice of social intervention

David Prades Gómez[1]

ORCID: 0000-0001-6096-0087

For citation: Prades Gómez, D. (2022). Reminiscience: creation of art using memories and emotions. Using artificial intelligence for the practice of social intervention. *Revista de Treball Social*, 223, 1-19. https://doi.org/10.32061/RTS2022.223.07

Abstract

This paper strives to place in context the circumstances of the elderly and elderly people with Alzheimer's, while also setting out the general characteristics they bear and detailing various research projects that seek to improve the wellbeing of these elderly persons. A review is conducted which reveals how technology can favour mood in old age, introducing different lines of research and innovative social projects, emphasising social intervention through artificial intelligence. The world and society are evolving on a daily basis; hence, intervention and the social field must adapt to these changes, innovating in the way we intervene with people, without overlooking the interventions and models that have led us to the present day.

Keywords: Social intervention, social innovation, artificial intelligence, elderly people with Alzheimer's, mood, wellbeing.

---

[1] Social worker interested in innovation, new technologies and art. davidpradesgomez@gmail.com

1. Introduction

This paper provides a narrative on social intervention within the sphere of social work with regard to old age and elderly people, placing existing problems into context. It also details how various research projects carried out over a number of decades by a wealth of professionals have sought to discover how to improve the mood and wellbeing of these people.

The article provides an introduction to and places into context how technology favours and plays a role in the exercise of social intervention, completing individuals' social histories by depicting major events in the lives of the people we work with in an artistic fashion to bring about a positive impact on residents and professionals.

It goes on to set out how artificial intelligence – one of the latest technological developments on the globe – can be used within the social sphere, briefly explaining what it consists of and how far it can go.

Finally, we present Reminiscience, a social and technological project conducted in a residential care home in Sant Cugat which makes it possible to express emotions, feelings, recollections, memories, creativity and imagination in art form, outlining how social intervention may unfold in the not too distant future. The methodology used to carry out the project is detailed, a sample of the results is shown and, in order to conclude, a number of final reflections are made.

2. Old age, characteristics and research projects

From the moment we are born, every single human being experiences a process of maturity, going through various stages during our lives. The final stage for humans is old age when we undergo "biological, psychological and social changes, though it must be noted that these changes do not impact everyone in the same way" (Ávila et al., 2014, para. 7).

Biological and physical changes are the most substantial due to bodily impairment, causing it to "become physically vulnerable when faced with situations that previously unfolded without any issues" (Papalia, 2009, cited by Ávila et al., 2014, para. 7). On a social level, interpersonal relationships are affected, loss of interest in social activities is common and affected individuals engage less actively with society or their family. However, psychological changes have the greatest impact on an individual's "way of thinking, memory loss and intellectual and emotional abilities" (Ávila et al., 2014, para. 8). Perchance the changes to which a person is apt to be exposed as he gets older are the biggest challenge "because this stage is viewed as a period when an individual will experience a decrease in abilities, passiveness, impairment and illness" (González, et al., 2010, cited by Ávila et al., 2014, para. 9), undergoing new events and roles that will determine each person's future.

This biological process is studied by science as gerontology, which "is the scientific discipline that examines the processes and problems affecting senior citizens from a range of perspectives and fields" (Mecohisa, 2019, para. 4). It addresses the process of ageing from all psychological, social and physical standpoints, observing how these are faced by individuals and institutions. Ageing is studied in its entirety with "two main goals: to prolong life and to improve quality of life" (Mecohisa, 2019, para.8).

At this stage, an individual's state of health is more delicate, an individual is more vulnerable and there is a greater risk of suffering from various diseases and illnesses. There are many highly common diseases among elderly people, such as Alzheimer's, Parkinson's, fibromyalgia, hypertension or depression; however:

> despite these diseases being highly common among elderly people, a whole host of developments, technological innovation and progress to improve quality of life has made it possible to deal with these diseases with greater opportunities in order to both overcome them and to cope with them to the best extent possible (Fass Foundation, 2020, para. 5).

One of the primary goals of gerontology professionals is to find out about, oversee and encourage an ageing process that is centred on the wellbeing of elderly people. The way we are involved and work with this group is changing, undergoing innovation with work methodologies and approaching various problems they exhibit. Society is constantly evolving and this means that there are increasing numbers of people reaching old age, coupled with the emergence of new opportunities.

> Increased ageing of the population poses the need for more in-depth knowledge of the various factors that have a bearing on their positive development, because the aim is not merely to live longer but rather to live life fully during those years (Arias and Soliverez, 2009, p. 3).

It is for this reason that "in recent decades numerous research projects have been conducted that have delivered progress when it comes to understanding aspects relating to wellbeing during old age" (Arias and Soliverez, 2009, p. 3). Several studies have "demonstrated that, as an overall indicator, subjective wellbeing does not change with age, despite the fact that minor changes may be exhibited conditionally in certain dimensions" (Villar et al., 2003, cited by Arias and Soliverez, 2009, p. 14). On the other hand, longitudinal and cross-disciplinary studies describe the fact that negative emotions fall as a person ages. Research projects by Mroczek and Kolarz (1998) conclude that senior citizens show higher levels of negative emotion (unhappiness) compared to young adults.

Moreover, various relationships that provide wellbeing have been examined using variables such as social activity (Okun et al., 1984, cited by Arias and Soliverez, 2009, p. 14), self-esteem (Izal and Montorio, 1993, cited by Arias and Soliverez, 2009, p.14), socio-demographic variables, functional status and health (Izal and Montorio, 1993), lifestyle and living

Praxis

Reminiscience: creation of art using memories and emotions. Using artificial intelligence
for the practice of social intervention

standards (García-Viniegras and González Benítez, 2000, cited by Arias and Soliverez, 2009, p. 14), self-functioning (Liberalesso Neri, 2002, p. 14), social support (Arias, 2004; Muchinik, 1984, p. 14) and personality traits (Chico Librán, 2006, p. 14).

One of the biggest concepts linked to wellbeing is mood and depression, which "is a serious health problem during old age that carries a poor prognosis (Licht-Strunk et al., 2007) and reduces quality of life among elderly people" (Blazer, 2003, cited by Afonso and Bueno, 2010, p. 213). For this reason, the aim of this paper is to set out how, through the use of technology, it is possible to intervene socially in an innovative fashion, triggering improved mood and, as a result, enhancing the wellbeing of these people.

3. How can technology encourage the wellbeing of elderly people?

For years, technological development has been progressing swiftly and broadly, hugely transforming professional sectors and generating involvement in society in a measured, invisible manner through convenience, normalcy and easy improvement of activities and services. These advances "have irreversibly penetrated many aspects of the day-to-day life of humans due to the simplicity, benefits and immediacy they afford" (Obando, 2019, p. 10). Likewise, they also bring challenges and changes in people's lives whereby groups such as elderly people may end up isolated due to not being able to adapt because "the changes are so swift that they set a demanding pace of life that sometimes proves difficult to keep up with (…) since they were not born during the technological age" (Paz Reverol et al., 2016, cited by Obando, 2019, p. 10). These developments and innovations can generate uncertainty and even rejection for them; therefore, an effective introduction may simplify and enhance the life of these individuals through the use of these innovations, generating greater engagement.

Nevertheless, there are an increasing number of older adults who use technology and the Internet to carry out everyday activities, and to keep in touch with the family and friends, using it as a form of leisure or adapting to the new means of conducting procedures such as requesting medical appointments or banking. "For elderly people, being able to handle new forms of technology should become a necessary step in order for them to benefit from greater independence and capacity in their day-to-day lives" (Obando, 2019, p. 11). This also nurtures psychological wellbeing due to the feeling of being able to handle technology and overcome the new challenges they encounter.

In this backdrop, opportunities emerge for a more active engagement with society through technology. When technology becomes "an interesting ally for the wellbeing of elderly people" (Muñagorri and Tarazaga, 2019, para. 1), projects like Muñagorri and Tarazaga's (2019) arise focussing on the use of virtual reality to improve the attention and mood of elderly

people. The way in which they engage in their programme is to capitalise on the benefits afforded by virtual reality, which is capable of "modelling any setting or situation, triggering emotions, impressions, thoughts and reactions among people, similar to those they would experience when facing similar events for real" (Muñagorri and Tarazaga, 2019, para. 2).

In their sessions, a safe environment is provided where participants can experience the world in an alternative fashion, exploring at their own individual pace. "It serves as a means of enhancing abilities such as attention, self-esteem and state of mind" (Muñagorri and Tarazaga, 2019, para. 5).

The advantages studied by Muñagorri and Tarazaga (2019) include attention, concentration, short-term memory, language and optimisation or maintenance of physical and cognitive abilities; change in troubled, nervous, aggressive or anxious behaviour, leading them to a calmer state; improvement in their self-esteem and mood; support with pain killing treatment; and a positive impact on state of health and perception of quality of life. As we can see, when technology is utilised suitably it can provide improvements to the health and mood of elderly people.

Computerisation and digitisation are progressing incessantly, with new disciplines and spheres arising alongside them that did not exist not long ago. At present, artificial intelligence and big data are becoming a huge helping hand for workers in a range of spheres. Algorithms help professionals draw and understand conclusions about problems more quickly, they suggest responses or diagnoses, they help read reports or translate them on a large scale or they make it easier to carry out steps more efficiently. Aside from improvements in professional circles, they also simplify all aspects of our society through accessibility, information and communication, and wellbeing.

It is not solely in technological sectors that work is conducted in contact with artificial intelligence, it also strengthens and improves practice in all other areas, such as the health and social spheres, as illustrated in the example from Muñagorri and Tarazaga (2019).

According to Codina (2020) when he writes "why artificial intelligence will transform social services", he states that:

> In the sphere of social services an increasing number of initiatives seek to capitalise on the potential afforded by artificial intelligence to strengthen and perfect public services and welfare systems, and to help improve quality of life for citizens (p. 98).

If we focus on artificial intelligence, it consists of technology bearing characteristics or abilities that could only be conducted previously through human intelligence. "The term applies when a machine mimics cognitive functions that humans associate with other human minds, such as learning or problem solving" (Gestión, 2018, p. 1). Artificial intelligence unfolds on the basis of algorithms, showing abilities to learn and develop

Praxis

Reminiscience: creation of art using memories and emotions. Using artificial intelligence
for the practice of social intervention

on the basis of examples provided, providing users with knowledge and experience in decision making.

This knowledge and these experiences are compiled and stored via neural networks, a "computational processing component, such as units similar to those in the human brain, which have the ability to process information and learn from it" (Hilera, 1995, cited by Matich, 2001, para. 4). This kind of processing has recently been developed in such a way that it is able to generate other images, this time guided by text, through the storage of millions of images.

Artificial intelligence capable of generating realistic images by means of any kind of word or sentence opens up a wealth of potential. This potential is developed for a host of fields, such as design, art or videogames, but it is also possible to intervene within the social sphere and make the most of the benefits afforded to us by this technology.

4. Reminiscience, the connection between artificial intelligence and social intervention

Reminiscience is a project that uses generative artificial intelligence to work with elderly people and people with Alzheimer's at a care home in Sant Cugat, having previously been tried at several homes in Barcelona with excellent outcomes. The programmes used to generate images are DALL·E 2 and Stable Diffusion. This type of tool "has learnt about the relationship between images and the text used to describe them" (OpenAI, 2022, para. 6) and we can use them to create realistic depictions by combining concepts, features and styles.

There are several goals to this project. Firstly, representing major events in the life histories of residents through the creation of art and, at the same time, working on reminiscence, "which is based on the impact of recollections on mood, showing significant therapeutic potential for treating depressive symptoms during old age" (Bohlmeijer et al., 2003; Bohlmeijer, et al., 2005, cited by Afonso and Bueno, 2010, p. 213), whilst strengthening imagination and creativity, enabling individuals to express themselves freely.

Secondly, it is about connecting elderly people with technology and trying to reduce the digital divide that opens up as new developments are introduced. It constitutes a means of innovating with regard to how we operate in social terms, as indeed Codina (2020) states, "in a much more complex society, with new demands and forms of social vulnerability, where innovating along these lines is no longer an option but rather constitutes a necessity" (p. 98). Advancing and improving social intervention is an implicit factor in the work of all social workers. The best way to learn and develop is to forge new initiatives by means of projects and research proposals that steer us towards new knowledge, perspectives and practices, which will mould and shape a future innovative intervention when working with individuals. We need responses to current problems, but

there is also a need to prepare in order to face new problems that may arise in future. Consequently, adapting to the use of new means of intervening using innovative tools could help us to deal with these new problems.

"The potential afforded by reminiscence as a strategy for reducing depressive symptoms can be linked to the trend towards overgeneralisation of the autobiographical memory" (Afonso and Bueno, 2010, p. 213). One of the functions of social work in the care home setting, and not only specifically in this area, is to gain an acquaintance of the life histories of residents of the home where the professional practice is conducted.

> The social history is the first document used by social workers, from a historical standpoint. It was Mary Richmond who proposed systematically organising knowledge about the individuals with whom they would be working and drawing up the social history, transforming it into the most basic document in the file (Nieto, 2021, para. 3).

This intervention makes it possible to gain a familiarity of the foremost events in the life of residents which have impacted their current situation, aside from being useful to draw up social diagnoses and to simplify professional monitoring, etc. Reminiscience completes the social history by means of artistic depictions of major events via images, which help us improve the intervention delivering benefits for both residents and professionals.

The benefits for residents are substantial in terms of overcoming the digital divide, engaging them with more advanced, recent technology. This also leads to improvements in mood since the process of creation and the feeling of being part of the image put together – generated by themselves – instils in them a positive sentiment. Likewise, these images are created from their mind; therefore, the activity provides cognitive improvements when working on reminiscence and creativity.

For professionals, the benefits we reap are seen in the improvement in relations and the bond with the people we work with. We become more heavily familiar with and secure details that help us understand an individual. This bond generates and strengthens trust, security and mutual understanding; consequently, it simplifies the various aspects involved in the practice of social work, such as the issuing of social diagnoses or the performance of steps, among others.

The activity may be undertaken individually or as part of a group and may begin with talks between the professional and residents. Open and guided questions are made with a view to gaining information and to provide a setting where residents can freely express themselves. While working on reminiscence as part of the activity not only do we gather recollections and memories, we also create a setting where creativity and the resident's imagination can be strengthened, creating images about anything that enters their mind. These may range from landscapes and 3D characters to meals, pets and line drawings for colouring in. The scope

Praxis

Reminiscience: creation of art using memories and emotions. Using artificial intelligence
for the practice of social intervention

to nurture any kind of artistic expression lies in the creative abilities of each individual.

The performance of the intervention will vary according to the cognitive state and state of mind exhibited by the residents. The conversation will be more open with individuals who show better cognitive abilities and they will be more guided in the case of people with Alzheimer's or cognitive impairment, but they will all be able to take part and experience the activity in full. At the same time, group practices tend to take place with individuals exhibiting the best cognitive abilities. Indeed, these individuals also take part in the individual sessions as it is more difficult to conduct them with individuals exhibiting cognitive impairment because attention and participation is more limited.

In a less direct manner, families also take part in the activity substantiating and organising the information obtained from patients about their life histories. In addition, emotional moments arise where they connect with a relative, understanding the moment and the situation they are experiencing. It is sometimes surprising for them when they do not expect their relatives to be able to remember certain major events or to witness how the works of art produced are linked to the individual who created them, eliciting various emotions in them.

This intervention completes the basic tool adopted by social workers – the social history – discovering and depicting "the foremost events in the life of the user, which have an impact on the situation" (Nieto, 2021, para. 4) whilst also proving useful for us in order to: "prepare a social diagnosis, enable professional monitoring to be carried out on the patient and make it possible to discover the assessment of their problem" (Nieto, 2021, para. 4). Thus, it will allow for a much better understanding of the individual and make it possible to compare the onset of impairment based on how the individual depicts the same major events at different moments as time goes by.

5. Methodology

5.1. Design of the project

Reminiscience is a pilot project that employs a qualitative methodology, "a scientific method that examines the underlying meanings and patterns in social relationships, i.e., what people do and say within the social and cultural panorama" (Poveda, 2020, para. 3). It arises and is shaped on the basis of the social work framework, incorporating the use of generative artificial intelligence. In today's context where technological development shrouds many aspects in our lives, it enables us to combine highly differing disciplines, adding depth to "the professional practice of social workers who use as a basis their interdisciplinary training and their holistic perspective on social problems to engage in their role as an agent

of change in the complex processes of 21st century social transformation" (Raya, 2017, para. 2).

The primary goal of the project is to complete the life histories of residents using artistic depictions where they set out relevant events, memories and recollections, working on reminiscence and strengthening creativity and imagination. This provides a forum for free expression. The aim is to also allow elderly people to become more familiar with technology, engaging them with it and enabling them to gain a basic understanding of how it operates.

5.2. The process

The start of the process takes place months earlier, when the social professional becomes engaged with the sphere of generative artificial intelligence, learning to use it and developing basic knowledge to understand its functions. During contact with this technology, abilities and knowledge are strengthened, giving rise to a potential association between the two spheres despite them being so disparate.

This association takes place by means of the adaptability of both fields: firstly, artificial intelligence emerges to simplify basic processes in people's everyday lives; and, secondly, "innovating is an innate part of the practice of social work and emerges to provide a response to social problems, putting forward innovative solutions, fostering networking and designing new intervention strategies in real life to encourage inclusive societies" (No soy asistenta, soy Trabajadora Social, 2013, para. 2).

Accordingly, making the most of the timeframe in which the world's developments come about, this intervention within the sphere of the practice of social work emerges. In it, major events in people's life histories are depicted in an artistic way in images, completing "the technique falling within the methodology entitled the biographical method" (Sanz, 2005, p. 102). Initially, it was launched in care homes in Barcelona, although this intervention unfolds in a residential care home in Sant Cugat.

5.3. The population and sample

The population taking part in this social intervention comprises elderly people over the age of 65 who exhibit various cognitive and mood-related abilities, with the particular involvement of people with Alzheimer's. These individuals are primarily staying at a residential care home in Sant Cugat del Vallés, following the participation in the intervention of a number of care homes from Barcelona.

During this initial stage, the participating sample comprised 60 individuals, including all homes where the practice has been conducted. Over the coming months, a scientific research project will be carried out within the spheres of social work and psychology to assess and understand the cognitive and mood-related impact this intervention instils in people,

Praxis

Reminiscence: creation of art using memories and emotions. Using artificial intelligence
for the practice of social intervention

with 25 participating individuals and a control group that will comprise 20 individuals.

5.4. The technique

The technique used to perform this social intervention begins with the formation of the life history, which according to Carmen Miguel Vicente (2014) constitutes a

> means of selecting and organising past events; it makes it possible to look into the feelings, emotions and intentions of people, to analyse the causes that have shaped the present and to use this to explain the social system in which individuals finds themselves; the past is recreated in the present time (p. 8).

In the intervention, the implicit concept of reminiscence is adopted when it comes to gathering major events comprising life histories, the "act of remembering or voluntarily recollecting things that had been forgotten about" (The Free Dictionary, 2022, fr. 1). But at the same time it serves to strengthen creative abilities and the imagination, providing a forum where anything can be depicted completely freely.

Then, there is the technique adopted to use generative artificial intelligence programmes, known as prompt engineering. This technology operates "via the use of certain prompts or texts that we need to carefully create so that the aforesaid artificial intelligence can begin to work" (Onieva, 2022, para. 5). In order to obtain the outcome we would like, we need to guide the artificial intelligence with a detailed description, and the more descriptive it is the closer the outcome will be to what we are seeking. In addition, we can add the style or the form in which the image is created, whether this is an oil painting, a professional camera photo or even a depiction in tempered glass.

Consequently, the technique adopted in this intervention is to obtain information through major events in life histories, "compiling an individual's very own written words, as well as the acts observed by the researcher in his experience and his engagement with the theoretical content" (Miguel Vicente, 2014, p. 13).

5.5. Instruments

The instruments used in this social intervention are linked to new developments in technology – generative artificial intelligence to be precise – which "is based on in-depth automatic learning methods. They compile information about specific elements which is then used to generate other entirely new and realistic ideas" (EmpresaActual, 2022, para. 3). This technology is witnessing huge growth, allowing for the creation of content such as images, texts or works of art from scratch thanks to algorithms.

The programmes employed in this project to generate images are DALL·E 2 and Stable Diffusion. These programmes have the ability to create images and art combining concepts, features and styles. They allow for the editing of existing works of art and images, adding or removing elements such as shade, reflections or structures. "It has learnt the link between the images and the text used to describe them" (OpenAI, 2022, para. 6) via a process of "dissemination" that begins with varied patterns and gradually creates the image when it recognises specific components in it.

Another programme used is KREA.AI. This programme compiles millions of generations and images created by the above-mentioned programmes and it classifies them according to various categories, styles, spheres and characteristics. It provides us with the inspiration to create sentences and texts. When it comes to Reminiscience, it is used to find the suitable modifiers or style for each history and thus to be able to depict images and works of art of better quality, giving us a much closer portrayal of what people are keeping in their mind.

5.6. Data analysis

Once the images have been obtained, the data are analysed by sharing them with the family who verify the information and the results. There are several reactions observed. Firstly, they appear puzzled upon viewing the image and link it to their relative, although overall they express happiness and gratitude for the intervention carried out and its significance. Indeed, they are at times taken aback by the accuracy depicted in the histories when they themselves believed that their relative would not remember the events.

Furthermore, the image obtained is handed to its author, who can keep it, and it proves to be a useful tool for working with them subsequently. In addition, a copy is retained along with the file on each individual. Every intervention is documented with the date and the history, the results are stored and it is kept so that more information can be gained in relation to the life history.

Praxis

Reminiscience: creation of art using memories and emotions. Using artificial intelligence
for the practice of social intervention

6. Results

The results obtained from this social intervention and the handling of the generative artificial intelligence programmes are works of art that depict significant moments in the life histories of residents. Some of these results are as follows:

Fig. 1. Nelly in a flowery meadow   **Fig. 2.** A love poem

Source: Compiled by the author and the participants.

Figure 1 depicts Nelly, the dog that belongs to a female resident and lived with her for 15 years, running around a flower-filled meadow at sunset.

In the case of figure 2, the author of the image used to write poems. This creation depicts the verse of one of them as if it had been painted by Édouard Manet, one of her favourite painters. The verse is as follows:

> Tan bon punt ho vaig dir,
> ja me'n penedeixo.
> Per només un moment d'amor,
> aquesta vida val la pena.[2]

---

2   As soon as I said it, / I already regretted it. / For a single moment of love, / this life is worth it.

Fig. 3. Oil painting of Torremolinos

Fig. 4. Playing during the 1950s

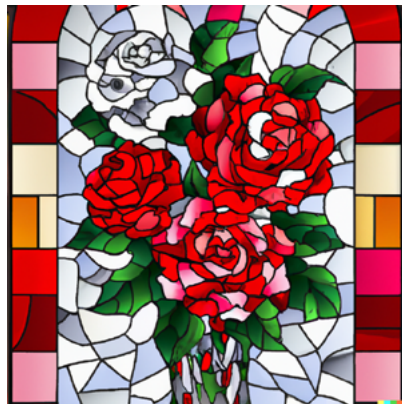

Source: Compiled by the author and the participants.

In figure 3, a resident with Alzheimer's from Malaga, where he lived since he was a small boy, depicted Torremolinos beach as if it had been painted by Picasso.

In figure 4, a resident easily recalls when she was a girl playing in the streets of her neighbourhood with some friends.

Fig. 5. Pla de Palau square

Fig. 6. Roses and carnations

Source: Compiled by the author and the participants.

In figure 5, a resident with Alzheimer's recalls the view when she went downstairs out of her home at Pla de Palau square in Barcelona along with one of the dogs that was with her during her childhood and teenage years. In this instance, the view of the street was formed first; next the dog was added as the intervention unfolded.

Praxis

Reminiscience: creation of art using memories and emotions. Using artificial intelligence
for the practice of social intervention

In figure 6, some roses and a carnation are depicted in stained glass. This image was created by a resident with Alzheimer's, who gave these flowers to his wife – who also had Alzheimer's – with whom he lived. For several years they lived in Aragon and he remembers the church that was there. The flowers he always gave her were roses and carnations and, on this occasion, they have been depicted to accompany them every day. The image was created with the help of the husband as he exhibited better cognitive characteristics despite both partners having Alzheimer's. During the intervention, the wife did not intervene at any time except when we obtained the result and she stated "I love the roses", looking at them longingly.

Fig. 7. Sabadell aerodrome   **Fig. 8.** People chatting in a bar

Source: Compiled by the author and the participants.

In figure 7, Sabadell airport is seen, which lies on the outskirts of the town where the author of the image lived with his children, who he recalls when they played near the airport.

In figure 8, an individual with Alzheimer's recollects when he was younger and went to bars and pubs in Barcelona in the afternoons and chatted and shared stories alongside his friends and locals, reminding him of the good times he recalls from that period.

Fig. 9. Hiking in the Pyrenees   **Fig. 10.** Past and present

Source: Compiled by the author and the participants.

In figure 9, a woman with Alzheimer's recalls the trips she used to go on with her group of friends on Vall d'Aran mountain where she lived for many years.

In figure 10, a resident sends a message to his wife who has cognitive impairment. It depicts an event they shared because they both experienced it throughout their lives. Indeed, it was one of the most important events for which the wife recalls her husband. Accordingly, upon her identifying the link between the image and her husband, she will remember him and see the flowers he would send her.

7. Final reflections

The opportunities afforded by generative artificial intelligence are substantial and numerous. They include innovating with regard to social intervention, bringing elderly people in touch with current affairs, engaging them in technological developments, celebrating their artistic bent, making them authors by generating images created on the basis of their recollections and memories and/or their imagination and creativity, transforming these images into art. It provides an entirely unrestricted form of expression allowing participants to portray emotions and feelings, to give a personal meaning to each of their creations, to recall things that had remained buried in the past and to experience them once again.

It allows for an improvement of the relationship between people and professionals, allowing them to get to know one another better and to engage with their surroundings. It delivers an understanding of the details and specific aspects they exhibit, observing and listening with greater attention. At the same time, families are involved in the process, being offered the chance to become better acquainted with one another

Praxis

Reminiscience: creation of art using memories and emotions. Using artificial intelligence
for the practice of social intervention

and make the most of the present day. The practice was widely acclaimed
by the participants who gave highly expressive reactions upon seeing the
results of their creations depending on what they stated or recalled. The
smiles and faces of disbelief upon realising how a programme has been
able to depict what they were expressing are part of the process of adapt-
ing to technology, although the desire to continue learning and to remain
in touch was conveyed.

There is a wealth of benefits afforded by this activity and as it
progresses and moves forward further we will become aware of more
characteristics and opportunities laid before us, and new methods and
fields for use will also arise. Given how broadly welcomed it was among
the people we involved in the initiative, there is scope to scale up this
project into a multidisciplinary scientific research project with the aim of
answering the question: does the use of generative artificial intelligence
in social intervention, by working on reminiscence and strengthening cre-
ativity, bring about noticeable mood-related and cognitive improvements?

Capitalising on technological developments is essential as the world
evolves towards a digitised and computerised society. Using these techno-
logical advances for the good of society is something that is championed
by David Wong, professor of philosophy at Duke University: "New tech-
nology is not good or evil in and of itself. It's all about how people choose
to use it" (Stewart, 2021, para. 3). Staying ahead, thinking and setting out
intervention practices that fuse technology and the social sphere in order
to find a solution to existing problems will make it easier to be able to
work on the problems that may arise in future. This will make it possible
to provide better help and support in solving social issues. Adapting and
innovating is an innate aspect of human beings, always seeking to improve
and experience a more fulfilling sense of wellbeing.

Bibliographic references

Afonso, R. and Bueno, B. (2010). Reminiscencia con distintos tipos de recuerdos autobiográficos: efectos sobre la reducción de la sintomatología depresiva en la vejez. *Psicothema*, 22(2), pp. 213-220. Redalyc. https://www.redalyc.org/pdf/727/72712496007.pdf

Arias, C. J. (2004). Red de Apoyo Social y Bienestar Psicológico en Personas de Edad. (Master's degree dissertation, Mar del Plata National University). http://rpsico.mdp.edu.ar/handle/123456789/402

Arias, C. J. and Soliverez, C. (2009) El bienestar psicológico en la vejez: ¿Existen diferencias por grupos de edad? *Memoria Académica del II Congreso Internacional de Investigación, 2 al 14 de noviembre de 2019, La Plata, Argentina*. Retrieved on 11 December 2022 from https://www.memoria.fahce.unlp.edu.ar/trab_eventos/ev.12063/ev.12063.pdf

Ávila, S. L., Pinzón, L. Y. and Torres, R. I. (2014). *Evaluación del estado anímico de los adultos mayores del grupo "Amigos del Corazón" de Sayulita Nayarit, antes y después de un taller de relaciones interpersonales*. GRIN Verlag.

Chico Librán, E. (2006). Personality Dimensions and Subjective Well-Being. *The Spanish Journal of Psychology, 9(*1), pp. 38-44.

Codina Filbà, T. (2020). Por qué la inteligencia artificial transformará los servicios sociales. *Revista de Treball Social*, 219, pp. 85-98. Dialnet. https://dialnet.unirioja.es/servlet/articulo?codigo=7784410

EmpresaActual. (2022, 29 March). *Inteligencia Artificial Generativa: la tendencia tecnólogica del futuro*. Retrieved on 11 December 2022 from https://www.empresaactual.com/inteligencia-artificial-generativa/

Fundación Fass. (2020). *Las 10 principales enfermedades que sufren las personas mayores*. Retrieved on 11 December 2022 from https://www.fundacionfass.org/general/las-10-principales-enfermedades-que-sufren-las-personas-mayores/

Gestión, R. (2018). ¿Qué es la inteligencia artificial y para qué sirve? Campus Virtual, Ministerio de Educación de Corrientes. Retrieved on 11 December 2022 from https://campus.mec.gob.ar/pluginfile.php/209250/mod_resource/content/1/Actividad%206%20-%20¿Qué%20es%20la%20inteligencia%20artificial%20y%20para%20qué%20sirve_%20_%20Tecnolog%C3%ADa%20_%20Gestión.pdf

Izal, M. and Montorio, I. (1993). Determinantes del Bienestar Psicológico en la Vejez. *Revista Argentina de Clínica Psicológica*, 2, pp. 147-159.

Praxis

Reminiscience: creation of art using memories and emotions. Using artificial intelligence
for the practice of social intervention

Liberalesso Neri, A. (2002). Bienestar Subjetivo en la vida adulta y en
la vejez: Hacia una Psicología Positiva en América Latina. *Revista
Latinoamericana de Psicología, 34*(1-2), pp. 55-74.

Licht-Strunk, E., Van der Windt, D. A. W. M., Ban Marwijk, H. W. J., De
Haan, M. and Beekman, A. T. F. (2007). The prognosis of depression
in older patients in general practice and the community. A systematic
review. *Family Practice, 24*(2), pp. 168-80.

Matich, D. (2001). *Redes neuronales: Conceptos básicos y aplicaciones.
Universidad Tecnológica Nacional*. National Technological University.
Retrieved on 11 December 2022 from https://www.frro.utn.edu.
ar/repositorio/catedras/quimica/5_anio/orientadora1/monograias/
matich-redesneuronales.pdf

Mecohisa. (2019). *Gerontología: Qué es y diferencias con la Geriatría*.
Retrieved on 11 December 2022 from https://mecohisa.com/
gerontologia-que-es/

Miguel Vicente, C. (2014). *La historia de vida como instrumento
de aprendizaje del trabajo social. Universidad Complutense de
Madrid*. Retrieved on 11 December 2022 from https://eprints.ucm.
es/id/eprint/27211/1/La%20historia%20de%20vida%20como%20
instrumento%20de%20aprendizaje%20%20del%20Trabajo%20Social.
pdf

Mroczek, D. and Kolarz, C. (1998). The effect of age on positive and
negative affect: A developmental perspective on happiness. *Journal
of Personality and Social Psychology*, 75, pp. 1333-1349.

Muchinik, E. (1984). *Hacia una nueva imagen de la vejez*. Belgrano.

Muñagorri, I. and Tarazaga, I. (2019). *La realidad virtual mejora la
atención y el estado de ánimo de los mayores*. Geriatricarea.
Retrieved on 11 December 2022 from https://www.geriatricarea.
com/2019/06/06/la-realidad-virtual-mejora-la-atencion-y-el-estado-
de-animo-de-los-mayores/

Nieto, V. (2021, 3 June). Cómo hacer una Historia Social en Trabajo
Social [Blog entry]. Victornieto. Retrieved on 11 December 2022 from
https://www.victornieto.es/como-hacer-historia-social-trabajo-social/

No soy asistenta, soy Trabajadora Social. (2022) ¿Es
necesaria la innovación en el Trabajo Social? Retrieved
on 11 December 2022 from https://nosoyasistenta.com/
es-necesaria-la-innovacion-en-el-trabajo-social/

Obando, L. A. (2019). *La tecnologización de la vida cotidiana en
adultos mayores. Caso Programa Universitario de Mayores (PUM)
en Salamanca* (Master's degree final year project on "ICTs in
Education", University of Salamanca). https://gredos.usal.es/
bitstream/handle/10366/145620/LEONARDO%20OBANDO%20

-%20TFM%20Tecnologizacion%20-%20adultos%20mayores.
pdf?sequence=1

Onieva, D. (2022). *Prompt Engineering, el nuevo trabajo de moda con el que ganar mucho dinero fácilmente*. Softzone. Retrieved on 11 December 2022 from https://www.softzone.es/noticias/programas/prompt-engineering-trabajo-moda-ganar-dinero/

OpenAI. (2022). *OpenAI*. Retrieved on 11 December 2022 from https://openai.com

Poveda, I. (2020, 2 September). Investigación cualitativa en Ciencias Sociales [s]. Universo escrito. Retrieved on 11 December 2022 from https://universoescrito.com/investigacion-cualitativa-en-ciencias-sociales/

Raya, E. (Coord.). (2017). *Innovación social en la práctica del trabajo social*. Tirant editorial.

Sanz Hernández, A. (2005). El método biográfico en investigación social: potencialidades y limitaciones de las fuentes orales y los documentos personales. Asclepio, 57(1), pp. 99-116. https://doi.org/10.3989/asclepio.2005.v57.i1.32

Stewart, M. (2021, August '04). Introduction to AI for Social Good [Blog entry]. Towards Data Science. Medium. Retrieved on 11 December 2022 from https://towardsdatascience.com/introduction-to-ai-for-social-good-875a8260c60f

The Free Dictionary. (2022). *reminiscencia*. Retrieved on 11 December 2022 from https://es.thefreedictionary.com/reminiscencia