Drawing from Memories

Drawing from Memories:

Representation and Creativity Across Space and Time

Edited by

Bernard Guelton and Teriitutea Quesnot

Cambridge Scholars Publishing

Drawing from Memories:
Representation and Creativity Across Space and Time

Edited by Bernard Guelton and Teriitutea Quesnot

This book first published 2025

Cambridge Scholars Publishing

Lady Stephenson Library, Newcastle upon Tyne, NE6 2PA, UK

British Library Cataloguing in Publication Data
A catalogue record for this book is available from the British Library

ISBN: 978-1-0364-1859-5
ISBN (Ebook): 978-1-0364-1860-1

TABLE OF CONTENTS

Drawing from memories

Bernard GUELTON & Teriitutea QUESNOT

This book intends to explore, analyze and better understand the processes involved in memory drawing. It offers a broad overview of representation, memory, space, and creativity themes. More specifically, it presents an original combination of different approaches to drawing, including 1) spatial representation (collaborative and sensitive cartography), 2) spatial and temporal memories (memory of place, generative mental images, and dream images) and 3) creativity and expression (artistic point of view, perception of space through drawing, invention, and exploration).

The title '*Drawn from Memories*' thus refers to the multiple forms of drawing and memory. It raises two main questions, relating to the psychological processes and socio-cultural aspects involved in the development of memory drawing, and the exploration of its material and sensitive contexts.

A significant proportion of studies on the relationship between drawing and memory are concerned primarily with its cognitive modalities, without taking into account its inscription forms. Conversely, another much larger field of study concentrates essentially on its material and sensitive expressions, ignoring the genesis of its elaboration modes. Creators and graphic designers find themselves in a kind of in-between position, concerned with the form to be given to memory drawing and are aware, at least in part, of the genesis associating memory and drawing. In seven chapters, this book attempts to provide an account of this diversity of forms of drawing and memory, between genesis and contexts of inscription. To put it more simply, the fundamental issues addressed in this book are of two complementary kinds: how does memory intervene in the drawing process? How does drawing constitute a particular medium for memory?

1. Cognitive aspects of the relationship between drawing and memory

1.1 How drawing improves memory

It is now widely recognized through the "drawing effect" that drawing improves memory compared to writing, whatever the context. According to Wammes *et al*. (2016), *drawing improves memory relative to writing,*

regardless of context, instructions and alternative encoding strategies, both within and across participants. [...] *Drawing improves memory by encouraging seamless integration of the semantic, visual and motor aspects of a memory trace*. Another study by Fernandes *et al*. (2018) reports the surprisingly powerful influence of drawing on memory. The authors find it is a reliable and reproducible means of increasing memory performance. They show that the gains are greater with drawing than with other known mnemonic techniques, such as semantic elaboration, visualization, writing, and even tracing the information to be remembered. *Drawing improves memory by encouraging the integration of constructive, pictorial and motor codes, making it easier to create a representation that is rich in context*. Moreover, according to Bainbridge *et al*. (2019), drawing is not only a very effective mnemonic tool, but it also reveals detailed information about the objects and space remembered.

1.2 Volumetric structure and functionality of objects for memorization

According to Feirreira *et al*. (2005), previous research on sketching processes during the visualization and design of objects indicates that drawing is essentially done part by part; objects' volumetric structures seem to dominate the current activity organization. However, some sketches do not follow this pattern and seem to be closely linked to parts of objects that have multiple functions (multifunctional parts). This suggests that knowledge of object functions can sometimes play a critical role in the reasoning behind the production of sketches. In the study by Kavakli *et al.* (1998) described by Feirreira (ibid.), participants were asked to observe and then draw three chairs from memory. If a participant drew a volumetric part in its entirety, before moving on to drawing another part, their drawing behavior was described as 'part by part'. On the other hand, if a participant drew only one element of a volumetric part and then moved on to draw an element of another volumetric part, their drawing activity was considered not to reflect the use of geometric structural knowledge. Kavali and his colleagues observed that a majority of volumetric parts drawings were in fact drawn part by part. However, they found that a significant proportion of drawings were not part of an overall process, which they attributed to objects' functional knowledge. In their view, semantic and functional knowledge could exert a top-down influence on object recognition tasks.

1.3 Drawing expertise

In his doctoral thesis, Perdreau (2014) examines what drawing expertise can tell us about the functioning of vision and visual memory. He finds that

drawing expertise is not linked to a more "truthful" view of the world, but to higher-order processes such as visual analysis of object structure. Proficiency in drawing is linked to the ability to integrate smaller information samples (compared with non-experts) into a more robust internal representation. According to Perdreau, intensive drawing training may affect high-level perceptual mechanisms as well as visual memory mechanisms, rather than the basic mechanisms that are well established by the perceptual experience we all share. In another study on drawing accuracy and the difference between experts and non-experts, Ostrofsky *et al*., report two theories regarding realistic drawing: *(a) a bottom-up perspective emphasizing accurate perception obtained by removing perceptual constants and other sources of perceptual error, and (b) a top-down perspective emphasizing selection facilitated by knowledge of the information that is important for representing the object.* Bottom-up vision is defined as perception derived exclusively from the immediate sensory information processed by the photoreceptors in the retina. In contrast, top-down vision refers to perception that is influenced by additional cognitive processes that go beyond the processing of the raw sensory signal received by the retina. The authors propose to combine these two conceptions in a unified approach that emphasizes visual attention rather than primary perception to explain drawing accuracy.

1.4 Importance of multimodal encoding in the development of memory drawing

In considering how drawing enhances memory, Wammes *et al.* (2019) examine the importance of the encoding context, which is of particular interest for studying the cognitive aspects in the development of memory drawing. Using the example of creating a word to be memorized, they show us the three stages in generating this word to be drawn: 1) producing an internal schematization of the drawing to be made, 2) generating the motor stages to produce the image that has been imagined, and 3) visualizing this image by allowing all the stages in the process to be updated in relation to each other. They explain these stages as follows: *The first – the elaborative component – is defined as the generative processes we need to engage in so as to recall an internal representation of the visual and semantic features that the word represents. This component is similar to a hybrid between deep levels of processing and visual imagery. The second – the motor component – is defined as the element-specific, manual motor program that has to be implemented to translate its internal (or external) image from one's mind to the page, which parallels the implementation effect, in which the production*

of a motor action in response to a word enhances memory. The third – the pictorial component – is simply the visual inspection and processing of the image that is being created or has been, and is well represented by the classic image superiority effect. The investigation by Wammes *et al*. (2019) aimed to examine the effects of each of these information sources on later memory. They conclude that drawing improves memory by integrating at least three information sources, i.e., the elaborative, motor, and pictorial components, noting however that the contribution of the motor component was the most important, followed by the elaborative and then the pictorial components.

1.5 Individual, collective and collaborative memories

People often form and retrieve memories in the presence of others. *Anyone who has given serious thought about memory recognizes that the act of remembering is influenced in part by the social dynamics that govern this activity* (Hirst and Rajaram, 2014). Depending on whom I am talking to, I will not recount the same event, omitting or detailing some elements at the expense of others. Yet, for almost a century, cognitive research on memory has focused mainly on isolated individuals. The study of group memory has progressed mainly in history, anthropology, sociology and social psychology (Rajaram et al., 2011). Early research on memory, such as the work by Ebbinghaus in 1964, or Bartlett (1932), focused exclusively on individual memory, considering its complexity to be already sufficient, and discouraged addressing it in its social context. The only exception to this focus on individuals remembering in isolation is Vygotksy (1980), who emphasized the *mediated nature of cognition*. When discussing development, Vygotsky recognized the powerful role social interactions can play in the framing of memory.

People do not remember in the same way when recalling individually, collectively, or collaboratively. By collective memory we mean a memory that is shared, but where such sharing can be transmitted more or less passively in communities of varying dimensions, such as memories transmitted on family, cultural, regional, or national scales. Part of this collective memory may be implicit and develop over a long period of time and on a transgenerational scale. Collaborative memory can be considered a subset of collective memory, but it is distinguished from it by the size of the groups involved and the objectives to be achieved, which often develop over a short time span. These distinctions between individual, collective, and collaborative memories are all important in terms of designed memories forms and implementations. These are amply illustrated in the various

chapters of this book. Each of these drawn memories is expressed through very different conventions and symbolic processes. A drawing from an individual memory will develop a mainly subjective codification, while a drawing from a collective memory will reproduce not only the content but also the codified forms of that collective memory. Collaborative memory linked to short-term objectives is often more neutral in its implementation in drawings.

Although we might intuitively think that collaboration improves memory, the reality is more complex. Indeed, when two people who know each other well share their memories, they can gather more information than one person alone. However, this positive effect tends to diminish as the size of the group increases, especially when its members did not know each other beforehand. This is due to both cumulative reasons, as each person's memories add up, and also because the interactions involved in collaboration enable information to emerge that would not have appeared if the memory were only individual. One person's memories can prompt another person to recall personal memories that would not otherwise surface.

However, in empirical and theoretical advances on the nature and influence of collaborative memory, it is now widely demonstrated that the effects of collaboration are counter-intuitive, as individuals do not remember so well when remembering in a group (Rajaram et al., 2011; Quesnot and Guelton, 2023). Members of a group memorize and remember differently from how they would if they memorized and remembered in isolation. Because of the group dynamic, group members are unable to recall memories they would be able to recall if they were alone. Most studies on social memory therefore largely point to collaborative inhibition (Weldon et al., 1997; Basden et al., 1997; Congleton and Rajaram 2014). To determine whether collaboration produces better recall than the sum of individual memories, three conditions have been singled out in experiments on the subject: 1) people remembering only individually, 2) people remembering together, and 3) single people grouped together under the terms of nominal groups. In fact, these 'nominal groups' are not really groups at all. They are individuals who remember on their own, but whose memories are combined. The score of a nominal group is equivalent to the total quantity of non-redundant information. When these comparisons are made, it is found that a nominal group outperforms collaborative recall, which is itself more effective than individual recall alone (Basden et al., 1997; Weldon, 2001; Weldon and Bellinger, 1997). Most studies of collaborative recall have been carried out under experimental conditions that promote language, in particular by recalling lists of words to be remembered both in groups and individually. However, as we pointed

out earlier, the use of drawing often demonstrates its superiority in terms of recall compared with the use of words and language alone.

In addition, the notion of a mental map is likely to encompass two types of representation and memorization by individuals: the cognitive map, which follows the exploration of a travelled space and has an internal spatial representation (popularized by Tolman as early on as 1943) and the conceptual map, which is a means of representing and combining all sorts of entities, concepts, and symbols, which can take the form of diagrams or charts. Drawing is a fundamental tool for elucidating these two often associated or confused aspects of the cognitive and the conceptual maps. Although they are the subject of very distinct practices and uses (geography and spatial cognition on the one hand; graphic design and conceptual exploration on the other), the study of the functioning of cerebral areas, particularly the hippocampus, shows, through an increasing number of studies, that the memorization of space and the space of memorization develop as a continuum (Schiller, 2015; Guelton, 2023). In the field of geography, the drawing of 'sketch maps' is a long-standing and much-discussed practice. Although there is no consensus on their analysis methods, this has not precluded the observation of robust results (Blades, 1990; Howard, Chase and Rothman, 1973; Kerst, Howard and Gugerty, 1987). Regarding collaborative spatial memory, research by Quesnot and Guelton (2023) revealed two novel facts: 1) the collaborative inhibition phenomenon (i.e., the reduction in the mnemonic performance of a group compared with that of its members individually) also applies to spatial memory; 2) interacting as a group during navigation allows for the mitigation of this phenomenon, and at the same time increases the accuracy of the mental maps produced as a group (freehand drawings). Two chapters of the work we present in the next section used sketch maps to show how space is memorized.

2. Drawing memories: collective, cultural and creative aspects

The work presented here addresses the issues discussed through a number of reflections and studies relating to collective, collaborative, and individual memories. It is divided into two main parts. In the first, the topic of drawn memories is approached essentially from its collective aspects through a survey that attempts to determine their characteristics and their relationship to a given territory (Sophie Mariani-Rousset and Laura Martinez Agudelo, Maria Elena Bulascchi and Elisa Ullauri-Llore, and Bernard Guelton). In the second part, the approach focuses more directly on the artistic and creative aspects of memory drawing. In this context, the reported experiments first consider collective production situations (Aurélie Herbet and Alain

Roger), followed by individual experiments in creative drawing. The first was based on a scenography to be constructed (Licelotte Lin), while the second focused on the memorization and transcription of individual dreams (Frédéric Verry).

The memories in question are all related to "space". So, it is almost always within the relationship between a (supposedly) pre-existing space and the space to be transcribed that the memorial process being analyzed is situated. In Sophie Mariani-Rousset and Laura Martinez Agudelo's work, as in three other chapters, urban space appears central. But for them, urban spatiality is not just a lived and remembered experience, but an appropriation and transformation of space through graffiti. While this graphic practice is inscribed on city walls over a more or less short period of time, it can also bear witness to a life experience that can be traced back to childhood and to the memory of the city's institutional sites. Hence, it is in this first chapter that we develop a fundamental practice: the appropriation of an environment and its physical and memorial transformation. The issue of places and the memory of the city is also very important in Maria Elena Buslacchi and Elisa Ullauri-Llore's chapter. This time, the transformations of the urban space at hand are not produced by the actors of the city in the sense of the transformations brought about by the graffiti artists presented in the first chapter. The city is undergoing large-scale transformation over a period of some thirty years, weaving complex relationships between recent transformations and an older memory that has not vanished. The transformed industrial heritage sometimes becomes the subject of the "new Marseille" new icons, without erasing the earlier spatial interactions between the city center, its port, and the sea. The authors, like those who follow in four other chapters of the book, attempt to analyze, through the drawings of the city's users, how memory, both individual and collective, bears witness to these transformations.

With Bernard Guelton, the themes of collective memory center on the forms of collaborative memory. This time, the focus is on an ordinary urban space that walkers have not been familiar with beforehand. Experimenting with this space by several groups of participants over a period of one hour raises the matter of the forms of memory apprehension that are captured by means of collaborative drawings. The issue is whether this memorization combines metric and temporal identification, or whether these two forms of memorization are independent. Finally, rather than an approach based on the speed of appearance of landmarks in collaborative drawings, a comparison of their order of appearance suggests different behaviors, particularly among subjects who repeated the experiments.

These initial chapters are based on an investigation that attempts to objectify the issue of memory drawing in its collective and collaborative forms. As in all the chapters described above, memorization through drawing is based on a double spatialization: space as experienced and space as drawn. The following chapters are more descriptive, examining the artists' artistic and creative environments.

Aurélie Herbet focuses on the artistic foundations of the experiments that formed the basis of the CORES (*Comportements et représentations spatiales collectives en milieu urbain*) project[1]. The ideas presented earlier by Bernard Guelton are part of the research discussed by Aurélie Herbet. The practice of the situationist drift founded by Guy Debord in the 1950s is compared with other more recent artistic practices based on interaction and collaboration between protagonists geographically dispersed. *In situ* artistic practices are examined in terms of their histories as well as gestural and performative contexts. The graphic aspect of the GPS tracks produced and visualized by participants during their walks will also be discussed, along with the graphic results of individual and collaborative drawings. These dynamic graphic forms are related to the participants' filmed drawings, and give rise to the notion of "sensitive cartography", which is the subject of the next chapter.

In this chapter, Alain Roger points out that sensitive cartography was originally designed by geographers who wanted to take into account the map's emotional and social context. The map should be seen as an art form in its own right. Consequently, the sensitive map is the product of authors' technical and artistic gestures and choices. It bears witness to a poetic relationship between the map and the site being mapped, through various elements such as the artistic form of the medium, the overall composition, the color scheme and the relationship between icons and symbols. The viewer's experience is likely to relive the author's as they walked the site. Rather than a previously codified meaning, the meaning is invented while drawing the map.

With Licelotte Nin, the drawn memories directly illustrate a creative experience that combines drawing and theatrical scenography. It bears witness to the evanescence in the conception and visualization of the image to be translated. The image is not fixed, but evolves, disappearing and reforming as the drawing progresses. As she points out, when it comes to designing a theatrical set, the act of drawing becomes twofold. *We draw*

1- CORES is a project supported by the French National Research Agency (ANR-19-CE38-003-01).

space within space. The space and time notions are very present and dictate the form the drawing will take on paper. The process of creating a drawing from a theatrical text is developed through the text and drawn examples. The memory of a theatrical text and the memory of a text in development are confronted and the multiple aspects of a drawn memory are explored.

The final chapter by Frédéric Verry is entitled "*Drawing dreams and exploring mental images*". In his study, Frédéric Verry shows us that many artists and writers exploit mental and dream images to generate narratives, drawings and plans. He shows it is possible to give a faithful account of one's dreams by transcribing their topography while taking account of dream distortions and ellipses. Following an account of his personal experiments, he uses other examples to develop the essential relationship between space and dream representations. Using the notion of the generative mental image, some authors and artists refer to these as 'doors' or 'thresholds' that invite invention and exploration.

The scientific purposes of drawing were amply deployed in the 17th and 18th centuries in the fields of anatomy, botany, zoology, technology (with the rise of machines) and architecture. The Museum's history dates back to Louis XIII, who in 1635 created the first royal garden of medicinal plants by royal edict. Plants were cultivated and studied there, and botany and anatomy courses were taught. The precision and beauty with which botanical species were drawn developed remarkably. It was not until the 18th and 20th centuries that distinctions and objectives emerged between drawings for descriptive and documentary purposes on the one hand, and for artistic purposes on the other. Although methods other than drawing emerged in the sciences, sketches, diagrams and graphs remained at the heart of scientific research, discovery and communication. In the artistic context, the expressive and emotional aims of drawing took on all their importance, culminating in a gestural and bodily expressiveness that stood on its own (Jackson Pollock, Hans Hartung, Mark Twombly and Wols).

In the chapters of '*Drawing from Memories*', a shift is observed away from this opposition between artistic and scientific research, which has been caricatured here. Drawing is indeed an activity of graphic expression on walls, analyzed by Mariani Rousset, the object of sketching and moving research by Licelotte Nin, the expression and testimony of an internal memorial process by Frédéric Verry. Now, this expressive activity is also a testimony and a document. It is this documentary aspect that is the subject of the first chapters of *Drawing Memories*. Sociological and cognitive research is based on drawings that bear witness to the memory of a memorial

process, a historical journey through the city. With Aurélie Herbet, Alain Roger, Licelotte Nin and Frédéric Verry, different forms of drawing are used in ‘research-creation’ and ‘creation-research’. These two complementary forms of research in art are not a mere play on words, but two moments in a process where one or the other is likely to initiate the other.

References

Bainbridge, W. A., Hall, E. H., & Baker, C. I. (2019). Drawings of real-world scenes during free recall reveal detailed object and spatial information in memory. *Nature Communications*, *10*(5).

Bartlett, F. C. (1932). *Remembering: A study in experimental and social psychology*. Cambridge University Press.

Basden, B. H., Basden, D. R., Bryner, S., & Thomas, R. L. (1997). A comparison of group and individual remembering: does collaboration disrupt retrieval strategies? *Journal of Experimental Psychology: Learning, Memory, and Cognition*, *23*(5), 1176-1191.

Blades, M. (1990). The reliability of data collected from sketch maps. *Journal of Environmental Psychology*, *10*(4), 327-339.

Congleton, A. R., & Rajaram, S. (2014). Collaboration changes both the content and the structure of memory: Building the architecture of shared representations. *Journal of Experimental Psychology: General*, *143*(4), 1570-1584.

Debord, G. (1958). Théorie de la dérive. *Internationale Situationniste*, *2*, 19-23.

Ebbinghaus, H. (1964). *Memory: a contribution to experimental psychology*. Dover.

Ferreira, I. M. S., Ball, L. J., Friede, T., & Scrivener, S. A. R. (2005). 24 Sketching behaviour in object recall and object copying. *Studies in Multidisciplinarity*, *2*, 329-342.

Guelton, B. (2023). “Mental maps”: Between memorial transcription and symbolic projection. *Frontiers in Psychology*, *14*, 1142238.

Hirst, W., & Rajaram, S. (2014). Toward a social turn in memory: An introduction to a special issue on social memory. *Journal of Applied Research in Memory and Cognition*, *3*(4), 239-243.

Howard, R. B., Chase, S. D., & Rothman, M. (1973). An analysis of four measures of cognitive maps. In W. F. E. Preiser (Ed.), *Environmental Design Research* (pp. 254-264). Routledge.

Kavakli, M., Scrivener, S. A. R., & Ball, L. J. (1998). Structure in idea sketching behaviour. *Design Studies*, *19*(4), 485-517.

Ostrofsky, J., Kozbelt, A., & Seidel, A. (2012). Perceptual constancies and visual selection as predictors of realistic drawing skill. *Psychology of Aesthetics, Creativity, and the Arts*, *6*(2), 124-136.

Perdreau, F. (2014). *Qu’est-ce que l’expertise en dessin peut nous dire à propos du fonctionnement de la vision et de la mémoire visuelle ?* (Thèse de doctorat). Université Paris Descartes. Paris.

Quesnot, T., & Guelton, B. (2023). Collective interactions, collaborative inhibition, and shared spatial knowledge. *Memory*, *31*(10), 1352-1370.

Rajaram, S. (2011). Collaboration both hurts and helps memory. *Current Directions in Psychological Science*, *20*(2), 76-81.

Ross, M. (2008). Social memory processes. In J. H. Byrne (Ed.), *Learning and Memory: A Comprehensive Reference*. Elsevier.

Schiller, D., Eichenbaum, H., Buffalo, E. A., Davachi, L., Foster, D. J., Leutgeb, S., & Ranganath, C. (2015). Memory and space: Towards an understanding of the cognitive map. *The Journal of Neuroscience*, *35*(41), 13904-13911.

Tolman, E. C. (1948). Cognitive maps in rats and men. *Psychological Review*, *55*, 189-208.

Vygotsky, L. S. (1978). *Mind in Society*. Harvard Univ. Press.

Wammes, J. D., Jonker, T. R., & Fernandes, M. A. (2019). Drawing improves memory: The importance of multimodal encoding context. *Cognition*, *191*, 103955.

Weldon, M. S. (2001). Remembering as a social process. *The Psychology of Learning and Motivation*, *40*, 67-120.

Weldon, M. S., & Bellinger, K. D. (1997). Collective memory: Collaborative and individual processes in remembering. *Journal of Experimental Psychology: Learning, Memory and Cognition*, *23*(5), 1160-1175.

I
Collective representations in drawing and memory

Laura Martinez Agudelo, Sophie Mariani-Rousset

Traces of the self and memories of place in street art

Laura MARTINEZ AGUDELO
Sophie MARIANI-ROUSSET

1. Introduction

Speech and writing have taken over from gesture and drawing, enabling us to express our ideas and thoughts with even greater precision. However, some visuals are still more famous than written documents: Lascaux and many paintings, for example; not to mention maps, which continue to be improved upon and used. Images also remain essential when it comes to returning to a time "before" the principle of reality - a time when childhood reigned, when the unconscious expressed itself freely and when emotions were present (the realm of the sensible). We draw on support, whatever it may be: a wall, a sidewalk... Street art enables citizens to appropriate the so-called public space in a roundabout way - granting themselves a piece of space where they can leave a trace, however ephemeral, of their existence. In any case, the memory will remain in their minds, if not in stone. Art is one of the last spaces of freedom. For several years now, however, we've been witnessing a reclaiming by politicians - who organize street art events in the form of frescoes or festivals. What does this mean for city users?

For our survey, we asked bystanders or acquaintances to choose from 6 locations in Besançon, proposed in the form of A4 photographs, and to draw what they wanted on a stylized A3-format version. We recorded and filmed them in action, to gather answers to our questions.

Besançon is a place of memory: how will the respondents act according to the places proposed to them? Will they let themselves go or censor themselves? What trace will they leave? Will their drawing evoke a memory?

Spaces in transition have always been popular places for graffiti and street artists (Landes, 2015). We, on the other hand, take public, institutionalized or neutral spaces. Will the memory of places influence individuals?

In the context of our study, models of bodily experience, and in particular the role of the body (Johnson, 1987), are called upon and questioned in order to draw out the respondents' relationships to the proposed locations.

The experience of/in space is thus mediated by movement. Memories of the places we visit are associated with bodily experiences in a particular stage of life. This is the case of a 59-year-old woman who recalls the period of her maternity by drawing on the image of the hospital, or the student in languages and sociology who remembers her time in police custody during a strike when she looks at the facade of the police station on the paper support proposed. In both cases, the body has experienced these spaces, and the meaning and relationship established with these places cannot be detached from this bodily experience. When respondents are asked to choose a place and draw on the paper supports (images of facades), they are invited not only to recall experiences in the place, but also to imagine other forms and functions for these spaces. Cognitive and bodily structures are linked (Johnson, 1987), and this is achieved through the appropriation of place. This link, which materializes in the various modalities of drawing, can thus provide clues, highlighted by the accompanying discourse, to the apprehension of places and in particular to the relationships established with the institutions and urban spaces proposed.

2. Street art, traces and memory

City walls are full of individual and collective traces. New forms of artistic expression make visible the transformation of societies and the different ways in which city dwellers reappropriate their own environment. The memory of oneself, of others, and of the city joins the collective memory. Riffaud and Recours (2016) assert that urban art reveals contradictions and tensions. It's not always easy to define, as it's both "a militant art, committed and engaging, [and] a form of cooperativism, emphasizing artists' cooperation with the powers that be". The traces of self and others are inscribed to reflect intimate and collective needs.

2.1 Street art: defacing or gathering?

Various forms of expression emerge alongside the need to transgress spaces and discourses, to denounce, evoke and transform or update the memory of oneself, others and places. At the same time, the question of defacing public places and institutions systematically recurs. The relationship to authority, to places and to the representations of power exercised in cities, and among their inhabitants, are highlighted. Urban art has historically been excluded from the institutional framework of cities, and artists have suffered suppression. The relationship with institutions and their representation is thus put to the test. In the 90's, "vandalism was the goal of most graffiti artists" (Guémy, Boniface and Verzeroli, 2022: 8), and even today this art

form is fraught with contradictions. On the one hand, the question of respect for the built environment and its history is one of the recurring concerns when judging or qualifying urban art, through its aesthetics and the choice of a place to display it. On the other hand, there is a need and a desire on the part of residents to appropriate and transform public spaces, and to construct and circulate discourses from/into the inhabited city in a different way.

Two trends, objectives or attitudes can be distinguished among street art artists and sympathizers. Guémy Boniface and Verzeroli (2022) establish that there is, on the one hand, the idea of provocation and damage, sometimes associated with anarchism and the questioning of private property; and on the other, the (artistic) creation of something that can "be useful, valued, perceived, that is a collective social benefit to bring people together around works of street art" (Guémy, Boniface and Verzeroli, 2022: 8-9), and in particular one that appeals to the memory of places. What is the place of transgression and memory in these two ways of considering artistic intervention/creation in the city? Provocation could also be reconciled with the desire to rally people around collective needs by addressing institutions of power. Today, street art is approached as a Western industry that brings different social conflicts into dialogue, and as a movement of identity resurgence (Guémy, Boniface and Verzeroli, 2022) that appeals to the memory of cities and their transformations.

2.2 **Urban memory and social relations**

Beyond individual memory, Maurice Halbwachs (1925) developed the concept of collective memory. This collective memory dialogues with the events in the city that mark the inhabited space and the different ways of experiencing and apprehending them as a society. Memory is thus the immediate trace of a reaction to an event. Many drawings, for example, appeared on walls following the attacks on Charlie Hebdo and the Bataclan in Paris in 2015. Collective memory presents itself "as one of the privileged tools (...) for constructing the history of the city" (Mazzella, 1996: 177). It's a way of expressing one's emotions directly – which goes well with the idea of the ephemeral. Therefore it's also about building bonds of solidarity, making emotions visible around what's happening in the city.

Urban art makes it possible to not only bring the memory of tragic events to life, but to pay tribute to the human relationships that buildings have sheltered in the past and, within an urban project, to build a very strong link between the public and the city favoring the gaze of the general public (Landes, 2015). In both cases, the gaze of others is solicited to make visible spaces that are affected/transformed by human action and modify living

relationships in the inhabited and perceived space. Calling on memories in the construction of place memories also leaves room for imagination and daydreaming. “Memory is a process of domesticating the images of reality, from which the mind takes over to simulate new compositions in a process of concatenation more akin to dream than reality. [...] Nomadic memory has its reasons, which the mind, even the least sedentary imaginable, most often ignores” (Bellier, 1998: 76). This nomadic memory thus accounts for the inscription of traces of the self in the process of conception and creation, enabling us to propose new compositions associated with memories and their actualization in the spaces and situations of the present. And these compositions allow us to question the production of the memory of place. “Over the past twenty years or so, it has become commonplace to question the way in which the memory of places is produced. In the same way as regions or ‘countries’, cities have been the subject of research aimed at explaining that behind the ‘spirit of place’ lurked a host of practices and discourses, the sedimentation of which created the mirage of a specific identity” (Vadelorge, 2003: 5).

In the context of more spontaneous, intimate creation, Saint-Germain (2012), drawing on Félonneau and Busquets (2001), speaks of “ritual creation: an activity that enables us to better negotiate the passage between two fundamental moments; a transitory moment that ensures a passage, since it is a genuine support for identity” (Saint-Germain, 2012: 94) – identity requiring an encounter with the other. “The tagger plays with his identity, that is, he learns who he is by practicing his art” (ib.: 95), all the more so as he “is” his tag through his signature. The drawing or collage can represent the author or an original theme, with or without a connection to the chosen location.

The choice of location for the writing is essential, providing the framework of meaning and the basis for the message. The medium (wall, façade, ground) allows a specific reading of the traces of urban artists, ideas and movements inscribed, giving an account of ephemeral actions. “The art of graffiti is an ephemeral action, a fleeting moment, a ‘furtive act to be accomplished as quickly as possible, with the most effective gesture, followed by the immediate abandonment of one’s own trace’ (Boudinet, 2002: 25)” (Saint-Germain, 2012: 102).

3. Traces of self in the city

The trace as a “reality of evidence” is difficult to define as a concept (Jeanneret, 2011). Street art, as a set of traces on different types of support,

provides access to clues to meaning in/of the city: “In my opinion, graffiti is (...) the ultimate riposte, the last sign of life in our concrete cities [...]. It’s still a precious sign that needs to be cultivated” (Thévoz, 1982). This “sign of life” would thus become “an object written in a materiality that we perceive in our external environment and endow with a particular potential for meaning” (Jeanneret, 2011). It’s a question of interrogating “the capacity in the present to refer to an absent but postulated past” (Jeanneret, 2011: 60). Thus, street art could be interpreted by questioning the materiality of its traces as an imprint, index, inscription or tracing of the memory of cities and the modalities of expression actualized in the present by their inhabitants.

3.1 Street art as an imprint of the present?

Is street art a form of autobiography? Bloch (2009) poses the question of the relationship between autobiographical memory and the Self, the former being closely connected to semantic memory, i.e. to our accumulated knowledge over the course of our existence. “It is by no means necessary for this autobiographical memory to be fully accessible to consciousness in the true sense of the term [...]. Faced with himself, the individual would act as if he were addressing an audience” (Bloch, 2009).

Street art images also have a relationship with the place inhabited, traveled through and experienced. This relationship is shaped by drawing. Drawing is a way of expressing oneself for those who don’t have access to the spoken word. “Spaces in transition have always been popular places for graffiti artists and street artists to intervene” (Landes, 2015). We, on the other hand, choose public, institutionalized or neutral spaces: what will this produce? Will the memory of the place influence people?

We asked the people of Besançon to “authorize” themselves to draw on particular places specific to the Besançon area, presented on paper mediums. We chose six places that we felt were “neutral” (wall, street), transgressible (police station, court-house), or intransgressible (church, hospital). Our aim was also to find out whether the respondents would feel connected to the city, brought back to a collective or individual memory.

3.2 Temporalities and the memorization of spaces

Urban art, in its form and function, is likely to reveal both individual and collective claims. Drawing is analyzed as a process, in particular as the realization and mediation of memories of city places. The aim here is to understand the role of drawings in the mention of memories, the production of traces of the self and the externalization of the memory of the city’s places. One of our hypotheses concerns the movement associated with the action of

drawing, which could account for the process undertaken by the respondent to reconstruct his memories. This physical and symbolic movement gives meaning to imagined representations by materializing them. It enables them to be evoked and named when the drawing is put into words, but also when the messages embedded in the drawing are inscribed. “Gibson associated art practices with the perception and mental representation of environmental space, Arnheim attached them to the higher functions of producing meaning of the cultural object and constructing its axiology” (Sobieszczanski, 2017). In non-chronological order, different stages in the conception of the drawing are thus identified:

- Emptiness/blockage or the impulse to start drawing: some participants hesitate before drawing or, in the opposite case, have very precise ideas about what should be drawn or displayed on the facades of the proposed locations. In both cases, the appeal to memories of the place can slow down or motivate the choice of drawing.
- Activating and externalising initial ideas, feelings and spontaneous traces.
- Reconfiguring, distancing and modifying/changing (shapes, colors, extension).
- Creating links when putting the drawing into words (description, evocation).
- Doubting, creating and rediscovering drawing progresses.
- Positioning (decision-making) by chosing elements to highlight or remove.
- Detourning from the original idea and appropriating drawing as a whole and.
- “What if”[1] and other possible creative options.

3.3 **Respondents and interviewers redesign space**

The survey took place in Besançon, from April to June 2023. We surveyed the city to decide on symbolic locations, photographing and selecting 6. We planned to set up directly in front of the chosen locations, with simple materials (table, chair, felt-tip pens and pencils). However, this proved complicated to set up. In all, we were able to interview 48 people (over the course of 45 interactions): 10 in public spaces and 38 in semi-public places (university, community bar, etc.), to whom we offered a stylized A3 format B&W support for the chosen photographs (fig. 1).

1-What if” indicates a drawing that was spoken and not made. Only one person chose to go above and beyond by choosing (and designing) its own wall.

Fig. 1: Stylized views proposed to respondents, based on photographs

Here are the instructions we gave to participants:

> "Hello, we'd like to suggest a few places where, if you had the opportunity, you could draw or paint, knowing that you'd have all the material and financial means at your disposal and complete freedom to do what you feel like. [Here are six photographs. Which one(s) do you choose?"

We then presented an A3 sheet of paper with the stylized photo in black and white. "If you find it difficult to draw, you can simply describe it to us". We filmed and recorded the drawing being made... and claimed (fig. 2).

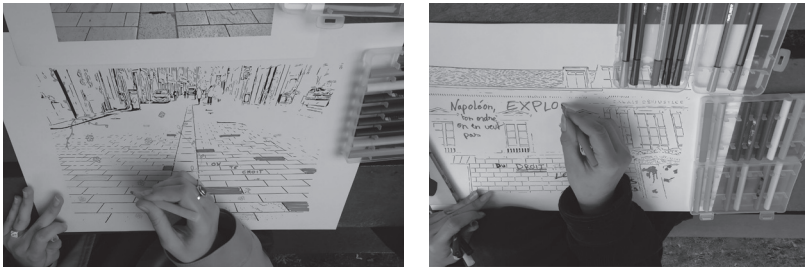

Fig.2: Screenshots of audio-visual recordings

We ended with a few questions regarding: age and profession, place of residence, knowledge and appreciation of urban art and personal experience. During the recording, we let the participants speak without intervening. However, we did have an interview grid with questions we were interested in tackling: choice of drawing (subject, size...), what it represents, relationship to place, other possible choices (to be drawn)...

The 48 people in our corpus produced 69 drawings (19 High Street, 15 Police, 14 Wall and Hospital, 9 Law Courts and Church), of which 57 were drawn and 12 imagined (fig. 3); 40 expressed some form of memory in their discourse and/or drawing. Certain places were preferred or avoided: there was a clear preference for the ground of the Grande Rue.

Fig. 3: Almost all the drawings produced

The subjects addressed by the respondents concern personal or collective memories, the traces of history - sometimes in a playful, affective (linked to childhood) or protesting perspective.

4. Personal memories and relationship to place

The process of attachment to a place has emotional, behavioral and

cognitive elements (Pirbabaei, 2015). The respondents' drawings highlight a modality of place memory that gives a place to the intimate and collective links created or to be proposed in the city.

4.1 Childhood and the past

"The meaning of the verb [memorize] has evolved to mean 'to remember', 'to make mention of'. In this, there is the notion of temporality, succession, of the absence of an object of thought, then of its presence: recall of memories" (Chatzivasiliou, 2018: 47-48). Childhood is present in two ways: in the drawing itself and in what the place or drawing recalls.

Childhood games and characters

In the drawings, we find playful aspects, games (fig. 4), characters and even figurines. A 26-year-old woman says: "For the high street, I'd imagine a big game, like when you were a kid [...], or a hopscotch in the middle... It would motivate you to have fun in the street when you're an adult". What we are talking about here is the need and desire to relive childhood experiences in adulthood; to include play areas to make the city's traffic spaces more amusing.

Fig. 4: Hopscotch (man, 46 years old) and Tetris (man, 46 years old)

This hopscotch theme prompted reactions from several people. A 35-year-old man says: "I remember it said 'earth' and at the top 'sky'. And then I'd [make] things that would represent a bit of what we liked when we were kids, like Jojo's, little figurines that would look like aliens...". We find a similar example with a 70-year-old woman who mentions the idea of drawing "a kind of RoboCop". Another, aged 33, wanted to use the hospital windows to create characters: "I'd put someone in the window... we're going to do Rapunzel... with her hair...". Fictional characters and childhood games are thus favored. They are called upon as elements that could be included in the public space as imaginary representations that could make the city more

playful. Images and forms from the past are thus summoned to motivate new interactions. The desire for graphic representation to be like "a child's drawing" suggests a search for the spontaneity associated with the act of drawing, in particular the possibility of drawing freely and participating creatively in a public space.

Evocation through place or choice of drawing

The choice of the place to be redrawn potentially includes a motivation or a memory. The movement of the drawing dialogues with mental representations and memories. The latter, sometimes explicitly expressed in the discourse, finds meaning and shape. We find this in the case of a 59-year-old woman who starts drawing a giraffe on the hospital facade... before realizing that this is the place where she gave birth to her two children, and that they were then given Sophie the giraffe... (fig. 5). "I chose this place because I think it's beautiful (...) and I've just realized that my children were born at the Saint-Jacques maternity hospital, so (...) they must also have had a giraffe when they were born, so there's a link... At first, I immediately chose the place because I liked it, but I wasn't thinking about the maternity hospital, and the giraffe because I love giraffes... and now I realize that everything can be explained".

Fig. 5: A giraffe on the Saint-Jacques hospital (woman, 59 years old)

In this case, finalizing the drawing enables her to step back and become aware of the links established between the choice of the place to draw, the drawing itself and memories (of life and experiences in the inhabited space). These memories are redrawn and associated with the space in which they were produced/constructed. A woman of English origin (aged 33) draws elements protruding from the roof of the hospital, and thinks back to the fact that "in Oxford, on the street where my parents lived, there's a house where someone - it was illegal, he didn't have permission to do it - it was his house and he had put the tail of a fox that went into the roof of the house and it's been there for 30 years and tourists come to see it and everyone loves it". She thus establishes a link between the memory of a renovation carried out on a house from her childhood, the drawing she is currently making, and the duration of the renovation in question. The unconscious works in memory. This is also mentioned by a 32-year-old non-binary person who depicts a vagina-shaped octopus on the façade of the Palais de Justice: "I think my unconscious created a bit of that". Once again, it's a question of the dialogue between the drawing process and discourse, which enables memories and representations to be brought into dialogue, and imaginary forms to be explored.

Some memories go back to a less distant time. For example, a 42-year-old woman draws a vacation spot (a beach in Portugal). The image, which she pictures perfectly, is projected. A 31-year-old woman chooses a hospital because one of her former teachers works there, and she did an internship there a few years ago. Here, the choice is made in relation to awareness of the space inhabited and practiced. Sometimes, evocation by place reveals a particular link between a personal decision and the values associated with it. A 15-year-old girl says she "chose the church because... well, I don't know how to explain it, but I got into a lot of trouble and then I decided to get back on track, especially for my grandfather. [...] In fact, I was in police custody, but that's ancient history". A relationship is thus established between a feeling and a desire for change.

4.2 **Street art as trace**

Stampoulidis (2019), taking an interest in urban art in Greece, perceives that the narrative potential of street art has not yet been studied in depth to understand how the underlying stories can be reconstructed by the public and how different semiotic systems contribute to this. It draws on concepts and methods from semiotics, cognitive linguistics and cognitive science. Drawing or making a collage on a wall means leaving a trace - even if it's destined to be ephemeral. It's a bit of oneself that, over a period of time and

whatever the content, will have left its mark. Our results show two types of traces: those that people wish to leave of themselves, and those left by others, cited during the interview.

Traces of self

Street art can be about marking one's territory, whether transient or lasting. Some like to leave something behind, without going so far as to draw on the walls, but others have tried it and appreciated the opportunity to do so. A 46-year-old man says: "I've already done some in Pontarlier, but a long time ago, I was very fond of graffiti, I still find it very beautiful (...)". And a 35-year-old woman says: "I've already drawn in town, once, with bombs, we went for a walk in our neighborhood, when we were students". We can therefore see here a closer relationship with street art, but one directly associated with another period of life (adolescence/youth) and not as a habitual practice in adulthood.

However, a certain respect can be heard in the various statements: pleasure can be expressed all the more when there's no guilt in damaging the walls - and the transience of the work contributes to this feeling. Whether the work remains visible or hidden is also a factor.

Sometimes it's a question of belonging - not as allegiance to one's city, but as a way of rediscovering a territory and making it one's own. "I once did a mural of a woman, an indigenous Colombian leader... It was in Bogotá. Here in Besançon, a friend and I did some tagging (...). Tagging is my 'artistic name', the way I sign... I used to see it as ugly... but when I understood that it's an exercise you do to make the street your own, then..." (woman, 31). The importance of tagging as a signature and trace of oneself is highlighted here in the context of the artistic practice of street art. Leaving a trace of oneself through the choice of a shape and a nickname appears to be a conscious exercise that can be learned: it's the basic exercise of this artistic practice, making it possible to appropriate public spaces in which to participate. It also helps to characterize the graffiti artist's identity and build graphic recognition. Similarly, a 33-year-old woman says: "I don't want to leave any unpleasant traces in the city, really. (...) I've already done things with chalk, with the kids, but no traces remain. I've already planted things in places where I wasn't allowed to... but it's the same spirit of wanting to make sure that... what surrounds us... that the city belongs to us, that the street is our living space, that it's up to us... to make the space our own...". The desire to take ownership of the space we live in, experience and walk through is clearly expressed. This is achieved through actions that are not directly associated with street art, but which reflect the same